BULLETIN
of the
Chicago Herpetological Society

Volume 37, Number 6
June 2002

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY
Volume 37, Number 6
June 2002

Editorial: An Eastern Massasauga Conservation Initiative 97

Field Notes for *Varanus albigularis* in Southern Africa . . . . . Karl H. Switak 98

New Records for *Liolaemus grosseorum* Etheridge, 2001 (Reptilia: Squamata: Liolaemidae) from Northwestern Patagonia . . . . . Luciano J. Avila, Cristian Hernan Perez, Mariana Morando and Nicolas Frutos 100

Miscellaneous 2001 Lizards from Chihuahua, Mexico . . . . . Julio A. Lemos-Espinal, Hobart M. Smith and David Chiszar 102

Book Review: *The Cane Toad: The History and Ecology of a Successful Colonist* by Christopher Lever . . . . . Kevin G. Smith 107

A Trip to Carlyle Lake . . . . . Steve Sullivan 109

HerPET-POURRI . . . . . Ellin Beltz 110

Herpetology 2002 113

Unofficial Minutes of the CHS Board Meeting, May 17, 2002 114

Advertisements 115

News and Announcements 116

Cover: Eastern Massasauga, *Sistrurus catenatus catenatus*. Photograph by Michael Redmer

STAFF

Editor: Michael A. Dloogatch
Advertising Manager: Ralph Shepstone

2002 CHS Board of Directors

Jack Schoenfelder, President
Lori King, Vice-President
Greg Brim, Treasurer
Emily Forcade, Recording Secretary
Steve Sullivan, Corresponding Secretary
Michael Redmer, Publications Secretary
Michael A. Dloogatch, Membership Secretary
Dan Bavirsha, Sergeant-at-Arms
Tom Anton, Member-at-Large
Darin Croft, Member-at-Large
Ron Humbert, Member-at-Large
Jenny Vollman, Member-at-Large

The Chicago Herpetological Society is a nonprofit organization incorporated under the laws of the state of Illinois. Its purposes are education, conservation and the advancement of herpetology. Meetings are announced in this publication, and are normally held at 7:30 P.M., the last Wednesday of each month.

Membership in the CHS includes a subscription to the monthly *Bulletin*. Annual dues are: Individual Membership, $22.00; Family Membership, $25.00; Sustaining Membership, $50.00; Contributing Membership, $100.00; Institutional Membership, $38.00. Remittance must be made in U.S. funds. Subscribers outside the U.S. must add $12.00 for postage. Send membership dues or address changes to: Chicago Herpetological Society, Membership Secretary, 2060 N. Clark Street, Chicago, IL 60614.

Manuscripts published in the *Bulletin of the Chicago Herpetological Society* are not peer reviewed. Manuscripts should be submitted, if possible, on IBM PC-compatible or Macintosh format diskettes. Alternatively, manuscripts may be submitted in duplicate, typewritten and double spaced. Manuscripts and letters concerning editorial business should be sent to: Chicago Herpetological Society, Publications Secretary, 2060 N. Clark Street, Chicago, IL 60614. **Back issues** are limited but are available from the Publications Secretary for $2.50 per issue postpaid.
Visit the CHS home page at <http://www.Chicagoherp.org>.

The *Bulletin of the Chicago Herpetological Society* (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society, 2060 N. Clark Street, Chicago IL 60614. Periodicals postage paid at Chicago IL. **Postmaster:** Send address changes to: Chicago Herpetological Society, Membership Secretary, 2060 N. Clark Street, Chicago IL 60614.

Copyright © 2002.

Editorial: An Eastern Massasauga Conservation Initiative

One of the most exciting natural features of the Chicago Region, and arguably our area's most remarkable reptile, is the eastern massasauga rattlesnake (*Sistrurus c. catenatus*). This species, our only venomous one, has been well known from parts of Cook County since the nineteenth-century work of Robert Kennicott, Illinois's first great naturalist-herpetologist. As recently as the late 1980s, massasaugas could still be found in appreciable numbers at historic Cook County sites.

Unfortunately, the massasauga has been persecuted and killed, illegally collected, or has simply lost too much of its habitat to ceaseless development in our rapidly growing metropolitan area. With minor variations, this same scenario has been documented statewide in Illinois and elsewhere throughout the range of the species. In 1995, the Illinois Department of Natural Resources listed the eastern massasauga as a State Endangered Species. Similar protection has been extended this subspecies elsewhere; it is now listed as threatened or endangered, or is otherwise protected by every state in which it occurs, as well as in Ontario, Canada. The United States Fish and Wildlife Service has completed a status review for the eastern massasauga, and it is now a candidate for listing as a federally threatened or endangered species. Under the Endangered Species Act of 1973, Candidate Species are species for which there are enough data to support listing, so it is likely that in the foreseeable future this feisty little pitviper will join the growing list of our nation's rarest animals. While listing can be a positive step for rapidly declining species, it is also a signal that the outlook for this species will continue to worsen without well-planned steps to implement recovery. Often this means that drastic steps will be taken (such as capturing wild animals for zoo breeding projects and possible future introduction of captive stock). These measures often make us feel as though something positive is being done. But while they may indeed be justified, it is unfortunate to think that we have let *any* species slide so close to extinction that its preservation can no longer be assured by protecting the often small and scattered patches of habitat where it remains.

In this and upcoming issues of the *Bulletin*, and at other CHS functions, members will begin to hear about our organization's involvement in massasauga conservation in our home state of Illinois. Already this year, at the invitation of the Illinois Natural History Survey, the CHS board made a field trip to south-central Illinois to observe what is perhaps one of the strongest remaining populations of eastern massasaugas (see Sullivan, pp. 109-110). There we learned about some of the issues that will surely affect the long-term prognosis for this species in Illinois. We also were treated to a firsthand look at an extraordinary team of researchers who hope the data they gather will help federal and state agencies make informed land-management decisions that will benefit massasaugas and humans alike. In June and July 2002, CHS will host back-to-back guest speakers who will present data on this unique rattlesnake. Finally, the CHS board has approved design of a new T-shirt to help start a campaign to raise funds for massasauga research and conservation in Illinois.

What can ordinary CHS members do to help this imperiled snake? In the next few months you will see advertisements for the new CHS massasauga T-shirt. Please consider purchasing a shirt (or two!). Members in the Chicago area are encouraged to attend talks by Andy Holycross (June 26) and Michael Dreslik (July 31) at the next two general meetings. If your state has a non-game or wildlife check-off option on your annual tax return forms, consider making a financial contribution; on an annual basis these programs often fund numerous small but important herp research or conservation projects. If you are lucky enough to know of a site that harbors a remnant massasauga population, by all means observe the snakes, but do not collect or disturb them under any circumstances. Similarly take great care in sharing the location of your massasauga sites with other amateur herpetologists if you are unsure whether they will collect or harm the snakes. This species reproduces slowly, and loss of even a few individuals can do irreparable harm to a population.

Most state conservation agencies are now very interested in finding new massasauga localities so that appropriate measures can be taken to protect snakes that remain on them. If you believe your site is unknown, report it to the proper authorities. If you are unsure, or if you need help identifying an appropriate agency, the CHS has established a new E-mail address (Emassasauga@aol.com) and will be glad to direct you to a state or county biologist who can take your information. Finally, and perhaps most importantly, we ask you to consider becoming an activist, even if only on occasion. Learn about massasauga and other herp-related conservation issues. If you live in a county or state (even if it is not Illinois) that has eastern massasaugas, be prepared to write to your elected representatives and let them know that conserving this species and others is important to you. Your voice can make a difference. **MR and MAD**

Bull. Chicago Herp. Soc. 37(6):98-99, 2002

Field Notes for *Varanus albigularis* in Southern Africa

Karl H. Switak
Natural History Photography
6377 Stone Bridge Road
Santa Rosa, CA 95409-5859

All sightings are by the author except where indicated otherwise. The rare find of this species in the Kalahari Gemsbok National Park (now Kgalagadi Transfrontier Park) is credited to Roderick W. Patterson (South Africa) and Frank Valleé (Germany).

My personal field observations indicate that much divergence exists in adult pattern and color among various populations of *Varanus albigularis*.

Republic of South Africa

24 November 1977. (Figure 1) Umfolozi Reserve, KwaZulu-Natal. Adult observed at edge of dirt road approx. 0945 h. Lizard partially hidden in tall, green grass. Some large rocks in region, plus a few large acacia trees; plenty of shaded areas. Weather hot and humid. Tip of lizard's tail damaged, but old injury. A herd of white (square-lipped) rhinos was grazing within shouting distance.

21 February 1989. (Figure 2) Umfolozi Reserve, KwaZulu-Natal. Adult specimen stretched out perfectly straight in the middle of a dirt road at 1140 h. Body coloration dirty gray with vivid dark banding on body and tail. Countryside quite lush, with green grass two to three feet in height to either side of the road. Also acacia trees and rock outcroppings. Weather on the warm side. Humidity high with scattered clouds (rain in the making).

24 January 1994. Large adult found D.O.R. on dirt road 6 km from entrance to Mountain Zebra National Park, near Cradock, eastern Cape Province, at 1035 h. I suspect the lizard was hit not more than an hour previous. It showed fairly clear banding on body and tail. Weather warm in the sun, cool in the shade; intermittent clouds. Countryside consists of rolling, green hills with scattered rock outcroppings. Elevation approx. 4000 feet.

3 February 1990. (Figure 3) Kruger National Park. Huge adult in excess of 3–3½ feet total length between Pretoriuskop and Skukuza at 0930 h. Lizard crossed paved road then quickly vanished into tall grass and thornbush country. It had rained heavily the previous night. Weather hot and humid. Waterhole nearby; frequented by elephants, etc.

8 February 1994. Kruger National Park. Adult at edge of paved road just north of Crocodile Bridge tourist camp, in the SE section of park, at 0835 h. Countryside green and profusely vegetated; some large trees. Weather hot and humid. It had rained heavily the previous night.

24 February 1994. Kruger National Park. Massive adult, close to 4 feet in total length and boasting a chunky, almost coffin-shaped head, some 100 yards outside entrance gate to Pretoriuskop tourist camp at 1150 h. Banding on body and tail not very distinct. Heavily vegetated region. Weather hot and humid.

2 February 1996. Kruger National Park. Young adult, perhaps 2½ feet in total length, on paved road between Phalaborwa Gate and Letaba tourist camp at 0955 h. Quite warm, very humid, and plenty of lush vegetation all around. It had been an "exceptionally" rainy period. Thousands of grasshoppers on the road.

18 September 2000. Kgalagadi Transfrontier Park, extreme northern Cape Province (formerly Kalahari Gemsbok National Park). See Bayless et al. (2002) for details.

Namibia (Southwest Africa)

8 October 1975. (Figure 5) Etosha National Park. Adult observed at small waterhole between Halali and Okaukuejo tourist camps during mid afternoon; temperature 85–90°F. Lizard walked towards waterhole with kudu cows, red hartebeest and single giraffe present; also yellow-billed hornbills and guineafowl. Countryside exceptionally dry and dusty; no humidity to speak of. Plenty of large grasshoppers within

Figure 1. Adult *Varanus albigularis* photographed in situ in the Umfolozi Reserve, Zululand, South Africa.

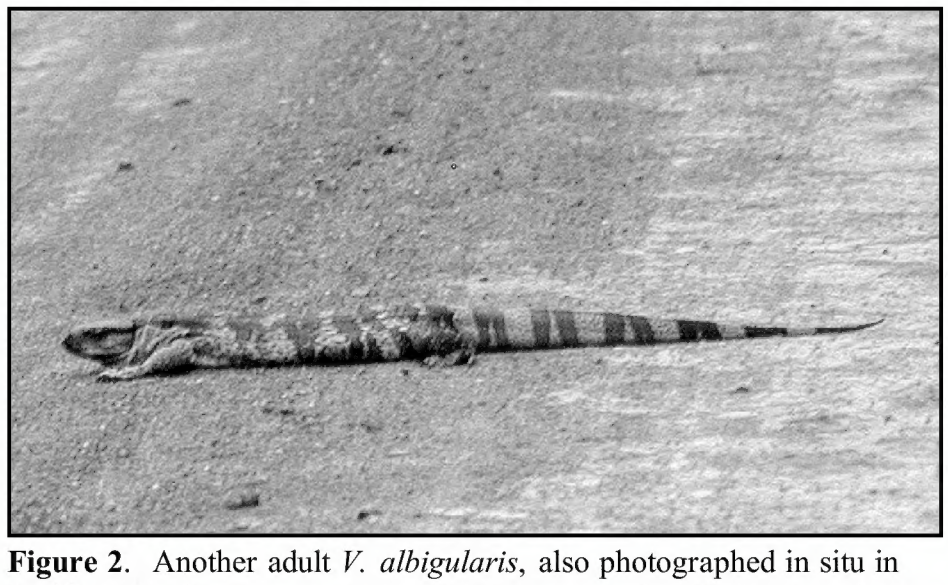


Figure 2. Another adult *V. albigularis*, also photographed in situ in the Umfolozi Reserve, but more than 11 years after the photo in Figure 1 was taken. Note the bold pattern on body and tail.

Figure 3. Huge adult *V. albigularis* photographed in situ in Kruger National Park, South Africa.

Figure 4. Habitat for *V. albigularis* in Etosha National Park, Namibia. The specific locale, known as Salvadora, lies immediately adjacent to the vast Etosha Pan.

vicinity of waterhole.

18 March 1985. Etosha National Park. Huge adult observed at edge of mammal burrow on road to Aus waterhole, east of Okaukuejo tourist camp at 1000 h. Lizard then started walking parallel to road for a short distance, after which it took a perpendicular direction and disappeared. A few clouds on the horizon and generally quite warm. Sighted by K. H. Switak and R. W. Patterson.

10 September 1987. (Figure 6) Etosha National Park. Adult walking in the middle of a dirt road between Halali tourist camp and turnoff to Okerfontein waterhole at 1130 h. Tip of lizard's tail was missing (old injury). Banded pattern on body and tail obscure. Weather warm and muggy. Hazy overcast with a few isolated sprinkles. Sighted by K. H. Switak and R. W. Patterson.

8 March 1984. Young adult on dirt road east of Khorixas, in the direction of a geological formation called Vingerklip. Time: 0900 h. Lizard scurried off road quickly as our vehicle approached. Plenty of vegetation to both sides of the road = tall grass, bushes and a few trees. Temperature warm, sky covered with clouds, and rain in the making. Sighted by K. H. Switak and R. W. Patterson.

Zimbabwe (Rhodesia)

29 January 1992. Two adult specimens observed crossing the paved road between Hwange (city) and main entrance to Hwange National Park (eastern section) at 1050 and 1100 h. Weather hot, windy and clear. Countryside fairly lush and heavily vegetated on both sides of the road = tall, green grass, bushes and a few large trees. Sighted by K. H. Switak and R. W. Patterson.

Literature Cited

Bayless, M. K., K. H. Switak and R. W. Patterson. 2002. First verified observation of the rock leguaan (*Varanus albigularis* Daudin, 1802) in Kgalagadi Transfrontier Park, Republic of South Africa, with notes on the flora and fauna. Bull. Chicago Herp. Soc. 37(4): 65-66.

Figure 5. Adult *V. albigularis* photographed in situ in Etosha National Park, Namibia. Note kudu and red hartebeest in background.

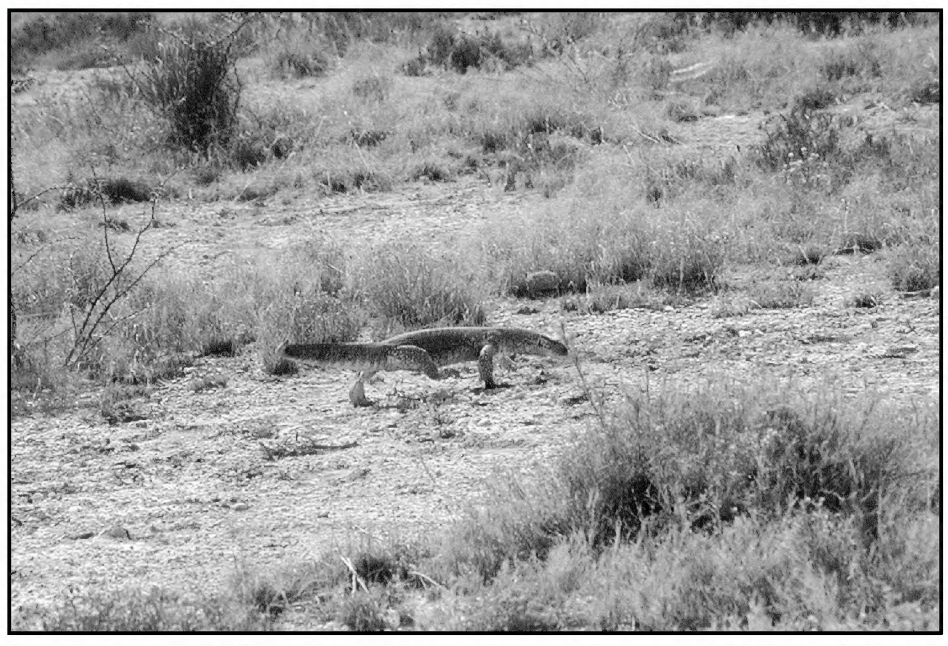


Figure 6. Adult *V. albigularis* photographed in situ in Etosha National Park, Namibia. All photographs by the author.

Bull. Chicago Herp. Soc. 37(6):100-101, 2002

New Records for *Liolaemus grosseorum* Etheridge, 2001 (Reptilia: Squamata: Liolaemidae) from Northwestern Patagonia

Luciano J. Avila[1], Cristian Hernan Perez[2], Mariana Morando[1] and Nicolas Frutos[3]

Liolaemus grosseorum is a small liolaemid lizard recently described by Etheridge (2001) with all known records in the departments of San Rafael and Malargüe, Mendoza Province, western Argentina. Between 2000 and 2002 we carried out field trips to west La Pampa, east Mendoza and north Rio Negro Provinces, and we collected several lizards that can be identified as *Liolaemus grosseorum* based on Etheridge's (2001) description and comparative material from the type locality. All lizards were collected using nooses, sacrificed with pericardial injection of Tiopental® Sódico Abbot, fixed with 20% formalin and later transferred to 70% ethanol. Latitude, longitude, and elevation were determined with a Garmin™ Global Position Device. All specimens are deposited in the LJAMM field collection, now housed in the Centro Regional de Investigaciones Cientificas y Transferencia Tecnologica La Rioja (CRILAR), Anillaco, Argentina (LA specimens are provisional numbers of this collection). In this note, we present these new localities with information about habitat and accompanying herpetofauna. La Pampa localities are the first citation of *Liolaemus grosseorum* for this province, extending the known limits of distribution 100 km east from previous cited localities. Rio Negro Province is the first citation for this province and this locality is the southernmost site of collection, 220 km southeast (airline) from the southern known locality of collection in Mendoza Province. All newly collected sites are depicted in Figure 1.

Site 1: **La Pampa Province**: Chical Co Department: Provincial Road Nr. 10, 5.1 km E La Humada (36°20′51.3″S, 67°57′04.2″W), 840 m, LJAMM 4026-4028, 30 November 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

Collection site was along the edges of a consolidated road with lizards using the open areas of the road as basking and hunting sites, and the adjacent spiny vegetation for protection and burrowing. Mainly shrubs of *Prosopis* sp., *Larrea* spp., *Cercidium praecox*, and *Condalia microphylla* composed the vegetation in this area but the entire site had been severely damage by bulldozing, with accumulations of dead branches and exposed roots. Soil was patchily vegetated, with compacted areas due to vehicle trails or where standing water had evaporated, and other areas with fine and loose sand. Only *Cnemidophorus longicaudus*, a small teiid lizard, was observed and collected in the same site.

Site 2: **La Pampa Province**: Chical Co Department: Provincial Road Nr. 10, 4.6 km E Agua Escondida (36°09′59.7″S, 68°14′58.0″W, 1068 m), LJAMM 4035-4036, 30 November 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

These lizards were collected along the edges of a consolidated road in a patchy habitat with some areas with flat, consolidated sandy soil, and others with small dunes of fine, loose sand, both covered with a mixed vegetation of grasses, perennial bushes as *Grindelia chiloensis*, and small shrubs of *Prosopis* sp., *Larrea* spp., *Cercidium praecox*, *Ephedra* sp., and *Condalia microphylla*. Only a female of another undescribed species of the *Liolaemus darwinii* complex was collected in this site. But several specimens of the very scarce leiosaurid, *Pristidactylus fasciatus*, were observed in the same site inhabiting a complex of burrows of the small rodent *Ctenomys* sp., and *Liolaemus gracilis* and *Cnemidophorus longicaudus* were observed basking and running through the vegetation.

Site 3: **La Pampa Province**: Chical Co Department: Road to Chos Malal, 54 km W junction National Road Nr. 151 (36°42′31.8″S, 67°57′00.4″W, 802 m), LJAMM 4105-4113, 30 November 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

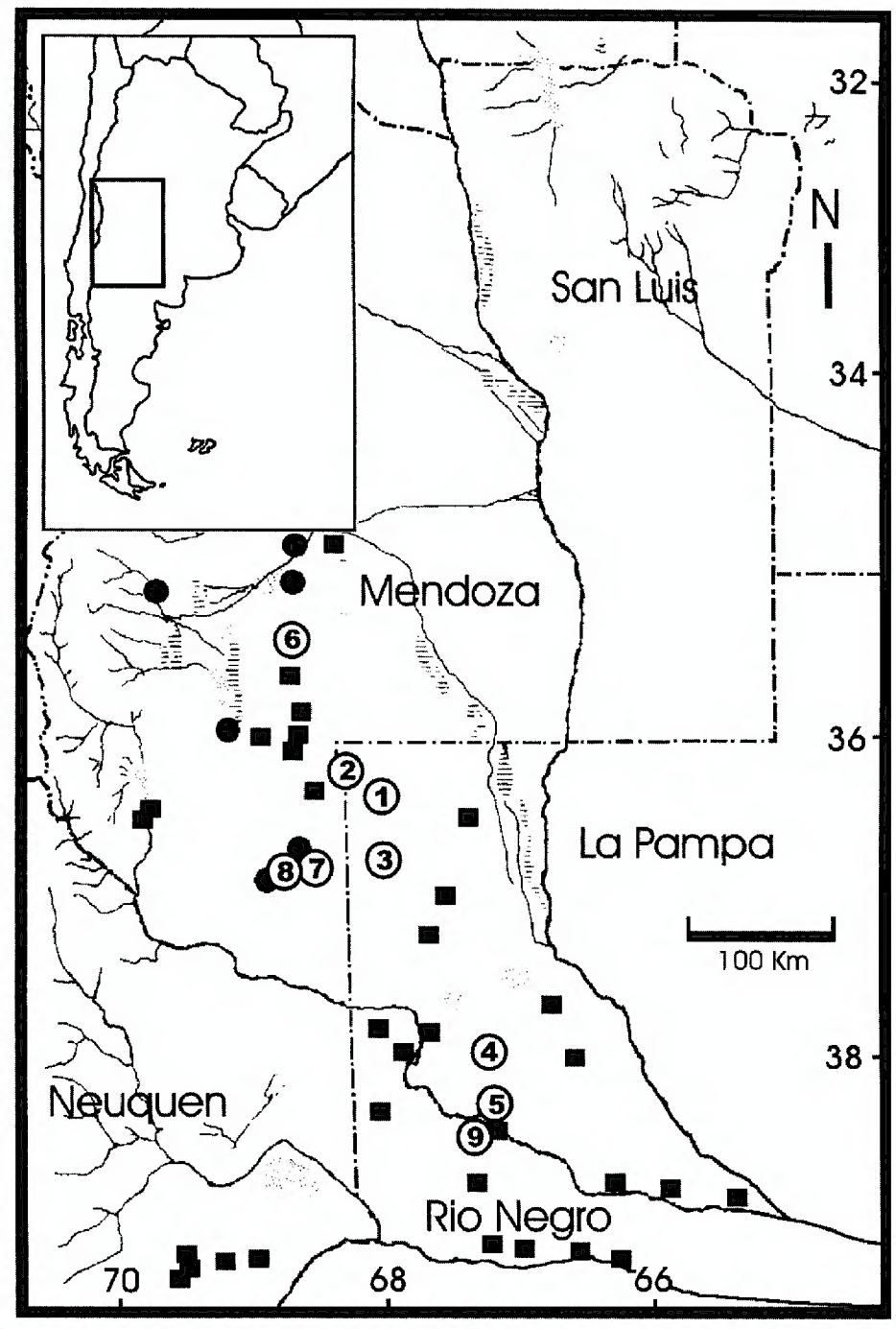


Figure 1. Known distribution of *Liolaemus grosseorum* (black circles), new localities (numbered circles), and surveyed areas without *L. grosseorum* but with at least one species of the *Liolaemus darwinii* species group (black squares).

1. CRILAR-CONICET, 5301 - Anillaco (La Rioja), Argentina. Present address: Department of Integrative Biology, Brigham Young University, 574 WIDB, Provo, UT, USA. E-mail: luciano_javier@hotmail.com.

2. Agustin Alvarez 1182 "A". 8000. Bahia Blanca (Buenos Aires), Argentina. E-mail: liolaemu@criba.edu.ar.

3. Alberti 495. 3000. Santa Fe (Santa Fe), Argentina. E-mail: nfrutos@hotmail.com.

In this area, all lizards were collected in the middle of a semi-abandoned road, with a substrate of soft sand. Some pebbly areas were covered by *Grindelia chiloensis*, *Hyalis argentea*, *Larrea divaricata* and semiannual herbs. *Liolaemus grosseorum* was collected with the undescribed species of the *Liolaemus darwinii* complex mentioned above, and *Liolaemus gracilis* and *Leiosaurus belli*, a typical Patagonian leiosaurid.

Site 4: **La Pampa Province**: Curaco Department: 1 km N junction Provincial Road Nr. 23 and road to 25 de Mayo (37°52′17.0″S, 67°06′35.1″W), LA 403-405, 3 December 2000. L. J. Avila, C. H. Perez, coll.

This site is located in a flat depression along the edges of a dirt road with small dunes covered with big bushes of *Larrea* spp. and temporary summer vegetation. Some areas had dry temporary ponds with a compacted soil. *Liolaemus grosseorum* was sympatric with *L. darwinii*, *L. cuyanus*, *L. gracilis*, and *Tupinambis rufescens* at this site.

Site 5: **La Pampa Province**: Curaco Department: 7 km NE Casa de Piedra (38°07′26″S, 67°06′19″W, 327 m), LJAMM 2206-2210, 29 January 2000. L. J. Avila, M. Morando, coll.

This site is a small depression, usually called a *cañadon*, with small sand dunes and numerous temporary rain creeks. Large bushes of *Larrea* spp., *Atriplex* sp., *Prosopis flexuosa* var. *depresa*, and *Senna aphylla* compose predominant vegetation in this site. *Liolaemus grosseorum* was collected with *L. darwinii*, *L. gracilis*, *L. cuyanus*, *L.* cf. *melanops*, and *Cnemidophorus longicaudus*. An adult *Bothrops ammodytoides* was observed eating a *Cavia* sp., and was collected at the same site; this snake has a broad range of prey including lizards, and is a probably a predator of *L. grosseorum*.

Site 6: **Mendoza Province**: San Rafael Department: Provincial Road Nr. 180, 30 km S El Nihuil (35°17′09.5″S, 68°41′52.0″W, 1471 m), LJAMM 4019-4022, 29 November 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

Small bushes of *Grindelia chiloensis*, *Neosparton aphyllum*, *Senecio subulatus*, *Ephedra ochreata*, *Atriplex* sp., and *Prosopis* sp. composed the dominant vegetation in this site; soil was a soft substrate of loose sand with dispersed gravel areas. In this area, *Liolaemus grosseorum* was collected with the undescribed species of the *Liolaemus darwinii* complex mentioned above, and *Liolaemus gracilis*. Several specimens of *Cnemidophorus longicaudus* were observed.

Site 7: **Mendoza Province**: San Rafael Department: 4 km E Agua del Toro (36°38′41.5″S, 68°25′54.2″W, 795 m), LJAMM 4029-4030, 30 November 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

The habitat in this site is a flat, crusty, consolidated, sandy soil, with same areas covered by volcanic rocks, and with a dominant vegetation of small spiny bushes of *Berberis*.

Site 8: **Mendoza Province**: San Rafael Department: Provincial Road 180, 28.1 km N southern road to La Matancilla (36°37′17.5″S, 68°36′38.2″W, 1095 m), LJAMM 4045-4048, 2 December 2001. L. J. Avila, C. H. Perez, N. Frutos, coll.

The habitat at this site is a flat, crusty, consolidated, sandy soil, with volcanic rocks, and small spiny bushes. *Liolaemus gracilis* and *Leiosaurus belli* were collected in the same site, and few kilometers south of this locality we collected a small gekkonid, *Homonota darwini*, and *Leptotyphlops australis*, a burrowing snake.

Site 9: **Rio Negro Province**: General Roca Department: Provincial Road 6, between Casa de Piedra and General Roca towns (38°32′37.1″S, 67°34′7.9″W, 322 m), LJAMM 4462, 15 January 2002. C. H. Perez, D. R. Perez, coll.

The only lizard collected here was a female close to *Liolaemus grosseorum* in morphology. Females of the *Liolaemus darwinii* complex are hard to identify, but this specimen is not *Liolaemus darwinii*, the other species in close sympatry in this region. The habitat was a small canyon with sandy soil and *Cercidium praecox*, *Larrea* spp., *Atriplex* sp., *Prosopis flexuosa* var. *depresa*, *Senna aphylla*, and several grasses including *Stipa* sp. and *Hyalis argentea* as the most common vegetation.

Behavior of *Liolaemus grosseorum* in all collecting sites was very similar to that mentioned for *L. olongasta* and *L. laurenti* by Etheridge (1992, 1993). Individuals were most frequently encountered in open areas and would run for the nearest bush and stop. If pursued, they would move about under the bush, and if further pursued, they would continue to move about under the shrubs, occasionally dashing across the open sand to another, nearby plant. The lizards retreated into small holes in the base of shrubs or, when available, under stones, only occasionally when they were pursued.

Our initial observations seem to indicate that *Liolaemus grosseorum* is a strictly psammophilous lizard with some preference for loose and soft sand areas, with or without dunes. Attempts to discover the species in adjacent rocky areas where *Liolaemus darwinii* is common were unsuccessful. In southwestern La Pampa Province *L. grosseorum* apparently is restricted to sandy depressions but is absent in surrounding areas with more consolidated or rocky soil. Figure 1 also depicts areas surveyed near some *Liolaemus grosseorum* collection sites. In these areas some member of the *L. darwinii* species group was found, but there were no sightings of *L. grosseorum*.

Literature Cited

Etheridge, R. 1992. A new psammophilus lizard of the genus *Liolaemus* (Squamata: Tropiduridae) from northwestern Argentina. Bollettino del Museo Regionale di Scienze Naturali, Torino 10(1):1-19.

————. 1993. Lizards of the *Liolaemus darwinii* complex (Squamata: Iguania: Tropiduridae) in northern Argentina. Bollettino del Museo Regionale di Scienze Naturali, Torino 11(1):137-199.

————. 2001. A new species of *Liolaemus* (Reptilia: Squamata: Tropiduridae) from Mendoza Province, Argentina. Cuadernos de Herpetologia 15(1):3-15.

Bull. Chicago Herp. Soc. 37(6):102-106, 2002

Miscellaneous 2001 Lizards from Chihuahua, Mexico

Julio A. Lemos-Espinal[1], Hobart M. Smith[2] and David Chiszar[3]

Abstract

Among the 395 specimens of 24 species and subspecies of lizards from Chihuahua here reported are *Urosaurus unicus* Mittleman, revived; *U. ornatus schmidti*, *Holbrookia elegans* and *H. maculata flavilenta*, new to the state; and a *Crotaphytus collaris* that resembles a *C. reticulatus*.

The lizards collected by Julio A. Lemos-Espinal in 2001, and now in Unidad Biología, Tecnología y Prototipos (UBIPRO) of Tlalnepantla, México, include 331 specimens representing 23 species and subspecies, excluding those of *Cnemidophorus* (now under study), and *Sceloporus* (now in press in this journal). We here report the miscellaneous group of taxa. All are from Chihuahua except for a few indicated from Coahuila and Durango.

Anolis nebulosus Wiegmann. Three: 6699, 6700, Ejido Dolores, Guadalupe y Calvo (25°58′57.6″N, 107°10′11.5″W), 954 m, 3 April; 7370, Arroyo El Camuchil, nr Batopilas (27°1′34.1″N, 107°45′44.5″W), 435 m, 19 June.

These localities supplement those cited by Tanner (1987), and fall within the projected range of the species (Lieb, 2001). There are no superciliaries in either.

Barisia levicollis Stejneger. Two, both adults: 8200, 1 km N Creel, mpio. Bocoyna, km 86, hwy 127 (27°46′53.3″N, 107°38′33.2″W), 2413 m, 7 September; 8500, 15 km S Basigochi de Aboreachi, mpio. Guacochi (27°5′26.3″N, 107°14′40.3″), 2400 m, 11 September.

The dorsals are 48-50; 16 scale rows; 2-2 postoculars; preoculars contacting medial anterior supraocular; 1-1 superciliaries. They are uniform tan except for an irregular series of light spots axilla to groin. These characters and localities are consistent with the review in Guillette and Smith (1982).

Coleonyx brevis Stejneger. Two: 7422, betw Carrillo and Rancho Los Arenales (26°58′23.4″N, 103°52′48.5″W), 1125 m, 24 July; 8083, Rancho El Carmen, km 169, hwy 45 1280 m, 5 September.

Only three other localities for the species are known for Chihuahua (Lemos-Espinal et al., 2001). The five localities all fall within the projected range (Dixon, 1970).

Cophosaurus texanus scitulus (Peters). Twenty-nine: 6732-41, Llano El Victorio (29°55′15.9″N, 105°39′58.7″W), 1282 m, 8 April; 6807, 2 km W Rancho El Consuelo (28°43′38.3″N, 104°18′4.3″W), 1662 m, 11 April; 7035, betw Rancho La Cepa and Rancho Las Cuatas (30°1′46.4″N, 105°48′58.9″W), 1324 m, 10 June; 7438, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 24 July; 7535-7, 7542-6, Rancho El Gatunozo, mpio. Camargo (26°6′50.7″N, 104°5′51.4″W), 1325 m, 28–29 July; 7603, Rancho La Bamba (30°5′11.7″N, 105°24′30.8″W), 1380 m, 30 July; 7755, Llano Ejido Flores Magón (29°58′57.6″N, 107°9′8.7″W), 1454 m, 2 August; 8027-32, Balneario División del Norte, mpio. Jiménez (26°53′32.8″N, 104°22′17.8″W), 1369 m, 4 September.

A hatchling female, 24 mm snout–vent length (SVL), was taken 4 September, along with a juvenile female at 42 mm SVL and a male at 46 mm SVL. All three probably belong to the fall 2001 brood. The only others taken at the same time were three adult males.

The same brood appears to be represented by six taken 8 April, varying 37–41 mm SVL in 3 females, 45–47 mm in three males.

Only four adult females were taken, varying 53–65 mm SVL, the smallest taken 28–29 July, the largest 2 August.

The 16 adult males vary 63–75 mm SVL. The two smallest, 63–64 mm SVL, were taken 8 April, but appear to be mature. All but the two smallest are larger than the largest female. Disparity in size of the sexes appears to exist even in hatchlings, or in the very young.

All localities represented fall within the known range of the subspecies, as depicted in Conant and Collins (1998).

Crotaphytus antiquus Axtell and Webb. One: 7297, Sierra de San Lorenzo, Coahuila (25°43′36,0″N, 103°10′7.5″W). McGuire (1996) reported the species from the same locality. The present specimen conforms with descriptions (Axtell and Webb, 1995; McGuire, 1996). The typical black collars of the genus are represented instead by two transverse, continuous, light gray collars enclosing round darker spots like those on the rest of the dorsum. The nuchal collar tones are so similar to those of other parts of the dorsum that the collars initially appear to be absent.

Crotaphytus collaris Say subsp. Two: 7461, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 25 July; 7942, Cementario Sierra La Campana, mpio. Tlahualilo, Durango (26°7′39.1″N, 103°41′00.0″W), 1123 m, 2 September.

A large male (103 mm SVL) and smaller female (88 mm SVL) both have a profusely light-spotted dorsum, an extensively interrupted anterior collar, and a row of 3–4 black spots axilla to groin, much as described by Lemos-Espinal et al.

1. Laboratorio de Ecología, Unidad de Biologí a, Tecnología y Prototipos (UBIPRO), Escuela Nacional de Estudios Profesionales Iztacala, UNAM, Apartado Postal 314, Avenida de Los Barrios s/n, Los Reyes Iztacala, Tlalnepantla, Estado de México, 54090 México.

2. EPO Biology and Museum, University of Colorado, Boulder, CO 80309-0334.

3. Department of Psychology, University of Colorado, Boulder, CO 80309-0345.

(2000) for a female from central eastern Chihuahua. In the male, the black spots are partially obscured by the melanized sides of the abdomen. It has only two scales in the supraorbital semicircles in medial contact, both very narrowly.

These may well represent *C. c. fuscus*, to which Lemos-Espinal et al. (2001, 2002) referred material from eastern Chihuahua. However, an exhaustive geographically discriminative study of Mexican populations is yet to be made.

Crotaphytus cf. *collaris* Say. One: 6875, Ejido Polvorillas (= Piedras Encimadas), mpio. Ojinaga (28°47′36.2″N, 104°13′30.8″W), 1440 m, 11 April. A female, 79 mm SVL, is discolored, presumably by formalin.

If properly identified, this specimen may be a unique variant of the species, judging from three unusual features supposedly never or rarely occurring in it. Its dorsal pattern strongly resembles that of *C. antiquus*, having rounded dark spots, ~3 mm in diameter, in transverse rows across the back, the interspaces much narrower than the spots, and the rows alternately darker and lighter (somewhat as in *C. c. melanomaculatus*). Pairs of rows are separated by a row of small, whitish dots, resulting in the impression of five, broad, dusky transverse bands across the back. Unlike *C. antiquus* females, the black collars are sharply defined. This pattern was noted by McGuire (1996: 77) in "some populations from Coahuila, Durango, Nuevo León, Luis Potosí and Zacatecas," assigned by Axtell and Webb (1995) to *C. c. melanomaculatus*.

Secondly, the oral epithelium is unpigmented except at the extreme rear, whereas in *C. collaris* "the coverage and density of the oral melanin is extensive" (McGuire, 1996: 47). However (loc. cit.) "In *C. antiquus* and *C. reticulatus*, black oral melanin in present but it is less extensive in both coverage and density."

Thirdly, the femoral pores are jet black, a feature shared only by *C. reticulatus* and *C. antiquus*, but occurring in no other species of the genus (McGuire, 1996: 50).

The supraorbital semicircles are broadly in contact, contrary to the condition in *C. antiquus*, but conformant with *C. collaris* and *C. reticulatus*. The specimen most closely resembles *C. reticulatus*.

We nevertheless tentatively refer it to *C. collaris*, because that species completely surrounds the locality for 6875, and because no other specimens like it are known from nearby. This view is endorsed by both Ralph Axtell and Richard Montanucci, who have long-term experience with these species.

Ctenosaura macrolopha Smith. Two: 7331, Satevo (26°59′25.8″N, 107°45′52.9″W), 567 m, 18 June; 7374, Río Batopilas (27°1′37.3″N, 107°44′20.4″W), 550 m, 18 June.

These subadults conform with characteristics of others from the same locality (Lemos-Espinal et al., 2001).

Elgaria k. kingii Gray × *E. k. nobilis* Baird and Girard. Two: 7307-8, Pacheco (30°5′1.7″N, 108°20′29.4″W), 1949 m, 14 June. The specimens are intermediate between *E. k. kingii* and *E. k. nobilis* in having the uppermost primary temporal contacting the uppermost secondary temporal (as in *E. k. kingii*), but 55-56 dorsals (intermediate). The dorsal crossbands are 3–4 scales wide (narrower than expected in *E. k. kingii*). The tail (121 mm) is nearly complete in one, with a terminal part regenerated of 30 mm.; the SVL is 92 mm.

The locality lies within the area of intergradation indicated in Webb (1970).

Gambelia wislizenii (Baird and Girard). Two adult males: 6944, Médanos de Bilbao, mpio. Viesca, Coahuila (25°25″36.7″N, 102°53′40.2″W), 1115 m, 3 June; 7113, Llano Ejido Flores Magón, mpio. Buenaventura, km 9 (29°58′57.6″N, 107°9′8.7″W), 1454 m, 11 June. Both records are from the periphery of the known range of the species (McGuire, 1996).

Hemidactylus t. turcicus (Linnaeus). Twenty: 7981–8000, Ejido San Dionisio, mpio. Tlahualilo, Durango (26°12′9.1″N, 103°41′47.2″W), 1111 m, 2 September.

This species was first reported from Durango at the same locality by Lemos-Espinal et al. (2001). The size distribution in this sample strongly suggests multiple clutches, as was noted in Lemos-Espinal et al. (2001). There are four SVL size classes: 27–31 mm (4), 35–36.5 mm (4), 38–40 mm (5), and 45–50 mm (7).

Holbrookia a. approximans Baird. Three: 6946, Sierra de San Lorenzo, Coahuila (25°43′36″N, 103°10′10.4″W), 1130 m, 6 June; 6950-1, Dunas Magnéticas, Coahuila (26°33′52.1″N, 103″10′10.4″W), 1091 m, 7 June.

A large male 70 mm SVL is densely light-spotted above (each spot ~1 mm in diameter), with the paired dorsolateral dark spots scarcely evident, more prompt near rump; three black slashes in the abdominal semeions (the posterior small) are completely enclosed by a large, elongate blue patch. The throat is heavily barred.

An adult female 64 mm SVL has the abdominal semeions essentially like those of the male, but the throat is less prominently barred, and the dorsum is nearly unicolor brown.

The juvenile female 53 mm SVL has 2–3 weak slashes in the abdominal semeions, lacking any blue. The dorsum is light brown with slightly darker paravertebral spots.

Holbrookia approximans Baird subsp. Twelve: 7060, Rancho Las Cuatas (30°3′7.0″N, 105°54′13.0″W), 1304 m, 10 June; 7114-6, 7120, 7779-83, Llano Ejido Flores Magón, mpio. Buenaventura (28°58′32.7″N, 107°6′11.8″W), 1499 m, 11 June and 3 August; 7582-3, Lago Texcoco (28°5′24.8″N, 104°5′51.9″W), 1345 m, 29 July.

All specimens are adults, the smallest a female 55 mm SVL and a male 59 mm; the largest is a male 72 mm SVL, a female 68 mm.

There is a sharp difference between the sexes in the nature of their abdominal semeions. In females they are small, dim, never jet black as a whole, and scarcely visible in some, whereas in males they are jet black and larger, and associated with no blue. Females are distinctly uniformly dun-colored above, whereas the males are profusely light-speckled. All

these characteristics, as well as the large size, are characteristic of *H. a. approximans*, except for the absence of blue in the semeions of males. An ultimate decision on the nomenclatural status of this presumed subspecies awaits study by Axtell.

Holbrookia elegans Bocourt. Three: 7207, km 20, Cañon de la Tinaja hwy, mpio. Casas Grandes (30°21′59.8″N, 108°13′38.7″W), 1732 m, 13 June; 7309-10, betw Pacheco and Jovales (30°4′56.7″N, 108°17′7.5″W), 2073 m, 14 June.

The two males, 47 and 52 mm SVL, have two large, jet black, slashes on each side of abdomen, each pair narrowly encircled by blue. The female, 50 mm SVL, has three small, brownish (not jet black) slashes on each side of abdomen. All three have the anterior scales of the supraocular area relatively large compared with the minute scales of other species of *Holbrookia*; median and anterior scales of supraorbital semicircles enlarged, not minute, and angles of median caudal chevrons strongly acute. These features distinguish this species from the adjacent *H. maculata* (Axtell, 1998). Although Axtell has known of the existence of *H. elegans* in Chihuahua for several decades (pers. com.), this is the first on record.

Holbrookia maculata flavilenta Cope. Thirty: 6672-7, 6753-75, Llano El Victorio (29°55′15.9″N, 105°39′58.7″W), 1232 m, 8–9 April; Ejido Polvorillas (28°47′36.2″N, 104°13′30.8″W), 1476 m, 11 April.

This series is remarkably uniform in size and pattern. The maximum SVL in the 18 females is 48 mm, and in 12 males, 56 mm. The smallest female is 37 mm SVL, the smallest male 42 mm. In three males (43–55 mm SVL) the throat is dark-centered, the sides conspicuously black-barred. In other males the labial region, dorsal and ventral, is barred, little if any different from females. The lateral abdominal black slashes are considerably smaller in females than in males, and do not extend so far onto the venter.

The only difference between the sexes in dorsal pattern is usually the more extensive light dots in males. Both sexes, however, have conspicuous large dark blotches in four rows—two lateral and two dorsolateral.

The name adopted here conforms with the distribution of *H. m. flavilenta* of Axtell's map (1998) and account for *H. maculata*.

It appears that this subspecies occurs sympatrically with *H. approximans* in the Ejido Polvorillas region, where Lemos-Espinal et al. (2000) reported the latter species. The specimen here referred to *H. m. flavilenta* from there is indistinguishable from the other series of that taxon.

All of the specimens here reported of all taxa of *Holbrookia* have a few of the subcaudal scales diseased or parasitized.

Phrynosoma cornutum (Harlan). Eighteen: 6953, Rancho El Cuervo (30°14′29.5″N, 105°7′45.2″W), 1134 m, 8 June; 7034, betw La Cepa and Las Cuatas (30°1′46.4″N, 105°48′58.9″W), 1324 m, 10 June; 7105-9, 7869-70, Ejido Flores Magón, km 9, mpio. Buenaventura (29°58′57.6″N, 107°9′8.7″W), 1454 m, 11 June, 2 August; 7381-2, 2 km S Ejido El Quemado (26°23′39.7″N, 103°41′10.9″W), 1133 m, 23 July; 7446, 7453, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 25 July; 7858, Llano 3 km N state line Chihuahua–Durango, hwy 49, km 150, mpio. Jiménez (26°41′13.8″N, 104°16′8.3″W), 1230 m, 5 August; 7871, Terracería a Santa Clara (29°21′33.8″N, 106°26′40.1″W), 1658 m, 4 August; 8022, San Dionísio, mpio. Tlahualilo, Durango (26°12′9.1″N, 103°41′47.2″W), 1111 m, 3 September; 8044-5, betw División del Norte and hwy 45 (26°47′15.9″N, 104°21′2.0″W), 1280 m, 5 September.

Large specimens (82–100 mm SVL) were found throughout the collecting season 8 June to 5 September. Three 59–67 mm SVL were taken 2 August; five between ll June (35 mm SVL, the smallest), and 25 July (49 mm SVL, the largest). A hatchling, 24 mm SVL, was captured 2 August. These figures suggest maturation in two years.

All localities fall within the range depicted by Price (1990).

Phrynosoma modestum Girard. Ten: 6750, 2.5 km E El Escondido (29°54′46.7″N, 105°30′39.7″W), 1426 m, 8 April; 6811, 2 km NW Rancho El Consuelo (28°43′38.3″N, 104°18′4.3″W), 1662 m, 11 April; 6952, Dunas Magnéticas, Coahuila (26°33′52.1″N, 103°10′10.4″W), 1091 m, 7 June; 7117-9, 7735, 7868,Llano Ejido Flores Magón, km 9, mpio. Buenaventura (29°58′57.6″N, 107°9′8.7″W), 1454 m, 11 June, 2 August; 7377, 37.8 km NW Bermejillo, Durango (26°10′47.0″N, 105°48′13.0″W), 1131 m, 22 July; 8021, San Dionísio, Durango (26°14′39.7″N, 103°38′43.6″W), 1103 m, 3 September.

A hatchling 23 mm SVL was taken 22 July. The largest ones, 50–64 mm SVL, were taken 7 June–2 August. Three, 42–43 mm SVL, were collected 8 April–11 June; however, one at 39 mm SVL was found 5 September. Growth rates appear to vary considerably, but two years to maturity seems likely.

All localities are blanketed by the projected range (Whiting and Dixon, 1996), although they fill in gaps between previously recorded localities in eastern central Chihuahua.

Phrynosoma orbiculare bradti Horowitz. Two: 6687-8, Mesa Ejido El Zorrillito, Guadalupe y Calvo (26°3′34.8″N, 106°57′38.8″W), 2595 m, 2 April.

Both are males, 48 and 88 mm SVL, with 23–27 and 25–27 femoral pores, the two series separated by one or two scales, and in double or triple rows medially, as illustrated by Tanner (1987). The locality lies within the range indicated by Horowitz (1955).

Uma exsul Schmidt and Bogert. Sixty-four: 6886-6902, 6904-41, Médanos de Bilbao, mpio. Viesca, Coahuila (25°25′36.7″N, 102°53′40.2″W), 1115 m, 4–6 June; 7876-84, Médanos in front of Cueva del Tabaco, mpio. Viesca, Coahuila (25°28′43.9″N, 103°2′14.9″W), 1112 m, 1 September.

The 28 males are 57–93 mm SVL ($\bar{x}$ = 74.1, standard error of the mean [SEM] = 1.88 mm), all with enlarged testes (including one 61 mm SVL) except for three at 59, 60 and 61 mm SVL.

The 36 females are 54– 78 mm SVL ($\bar{x}$ = 63 mm, SEM = 0.83 mm). Most individuals had flaccid oviducts, indicating

recent oviposition. One individual (6934) had one egg (8.78, 8.54 mm in length) in each oviduct. The other females had follicles 1.22–3.12 mm in diameter.

Uma paraphygas Williams et al. Fifty-two: 7386-7401, 7405-21, betw Carrillo and Rancho Los Arenales (26°56′23.4″N, 103°52′48.5″W), 1125 m, 23–24 July; 7929-35, sand dunes 1 km SW Rancho Los Arenales (26°58′33.5″N, 103°49′47.3″W), 1162 m, 24 July; 7463-9, Rancho Los Arenales (26°59′46.9″N, 103°49′29.8″W), 1165 m, 26 July; 7471-5, sand dunes of Laguna del Rey, Coahuila (27°3′27″N, 103°27′14.5″W), 1057 m, 26 July.

A review of the variation in 114 specimens of this species, contrasted with that of 212 of *U. exsul*, is in Lemos-Espinal et al. (2002). In the same work the literature on *U. paraphygas* was reviewed. We here supplement that information with data from the present series.

Of special interest are the five from Laguna del Rey, where Pough et al. (1978) thought intergrades between *U. exsul* and *U. paraphygas* occurred, based on number of ventrolateral dark bars. Our five all had two on each side, although the posterior one was small, tiny on one side in one. In but one of a total of 104 sides was there but one bar (1%). In 13% (13 of 104 sides), the posterior bar was dim, small or tiny. On the contrary, 100% of 212 *U. exsul* had a single bar, with no evidence of a second one (Lemos-Espinal et al., 2002).

Other diagnostic, although not categorical, differences of the two species pointed out by Lemos-Espinal et al. (2002) are substantiated in the present series. The femoral pores were 26–36 ($\bar{x}$ = 31, N = 84), and 83% were 29 or more. The minimal interfemoral pore counts were 14–23 ($\bar{x}$ = 19, N = 49), and 73% were 19 or fewer. Lemos-Espinal et al. (2002) recorded higher percentages (89% and 85%, respectively), but the differences are probably due to the much higher proportion of diffcult-to-count juveniles in the present series than in the series previously recorded. The subcaudal dark bars numbered 6–9 ($\bar{x}$ = 7.5, N = 35), and 86% were 7 or more (80% in the previous report).

The present series falls into two size groups: adults 51–79 mm SVL (N = 24), juveniles 30–41 mm (N = 28).

Wilgenbusch and de Queiroz (2000) recorded *U. exsul* from Durango, but in error. We have seen the specimens involved, and they are correctly identified but the locality is in error; the specimens undoubtedly came from Coahuila, to which the species is restricted.

Urosaurus ornatus caeruleus Smith. Thirty-four: 6794-6806, 2 km NW Rancho El Consuelo (28°43′38.3″N, 104°18′4.3″W), 1662 m, 11 April; 7531-4, 7558-94, Rancho El Gatunozo, mpio. Camargo (28°6′50.7″N, 104°5′51.9″W), 1352 m, 28 July.

Ten are females, varying 40–50 mm SVL. In half the abdomen is densely speckled, at various intensities; all have some speckling on anterior part of throat, much as in males but less intense; in 3 of those with unspeckled abdomen, the throat speckling is largely limited to chin and infralabial region.

The 24 males are 46–52 mm SVL; only two at 46 mm are as small as the largest *U. o. schmidti*. In all except one of the 46 mm specimens, the entire ventral surfaces of head, body, limbs and tail are strongly pigmented. Blue covers the abdomen except at midline, and about the rear half of the throat; elsewhere the pigmentation is black—not solid, but dense. In the fully mature but small exceptions, the pattern is the same but less intense; the blue is lighter, the black less conspicuous.

In both sexes the dorsal coloration is very dark with about six transverse back bars, split medially. Protective coloration is so nearly perfect that that no juveniles were taken of any subspecies, although they were probably present in late July. The greater number of males collected is probably correlated with their pumping behavior.

The present series extends the known range of the subspecies southward and eastward; it covers a large portion of the transmontane part of the state.

Urosaurus ornatus schmidti Mittleman. Nine: 6726-31, 7604-6, Rancho La Bamba, mpio. Coyame (30°5′51.6″N, 105°25′6.9″W), 1417 m, 7 April, 30 July.

This subspecies, not previously recorded from the state, is distinctly smaller than *U. o. caeruleus*; the five males are 44–46 mm SVL, the three measurable females 47–48 mm. Their dorsal pattern is also distinctly different from that of *U. o. caeruleus*, basically linear or reticulate, not distinctly cross-banded, and much lighter.

The middorsal scales vary considerably. Those in the outer paravertebral row are usually slightly smaller than those in the inner row, but some are subequal, and often they are distinctly smaller. The small vertebral scales are usually mostly in two rows, but three scales occur here and there; in a few three rows occur, reduced here and there to two.

Thus three subspecies of *U. ornatus* appear to occur in Chihuahua: *U. o. schottii* in the extreme northwestern corner, *U. o. schmidti* in the extreme east, and *U. o. caeruleus* in transmontane areas between.

Urosaurus unicus (Mittleman). Three: 7366-8, Arroyo El Camuchil, Batopilas (27°1′37.3″N, 107°44′20.4″W), 550 m, 19 June. This species is readily distinguished from *U. ornatus* and *U. bicarinatus* by its entire frontal, and from the former also by its acuminate ventrals, much greater spinosity, and absence of blue on the throat of mature males. To this species belong the specimens erroneously referred to *U. bicarinatus tuberculosus* by Lemos-Espinal et al. (2001) and Tanner (1987, fide John Simmons and Jack Sites, pers. com.), from La Bufa, Urique, near Pitahaya, and Arroyo El Camuchil.

The undivided frontal is shared in the genus only with members of the *nigricaudus* group (*U. gadovii*, *U. lahtelai*, *U. microscutatus*, *U. nigricaudus*, and possibly *U. irregularis*), where *U. unicus* no doubt belongs, although Mittleman (1942) placed it in the *bicarinatus* group.

There is no evidence at present that *U. bicarinatus tuberculosus* occurs in Chihuahua.

Uta stansburiana stejnegeri Schmidt. Ninety-one: 6712-

24, 6959-60, Aguaje Médanos La Bamba, mpio. Coyame (30°5′51.6″N, 105°25′6.9″W), 1417 m, 7 April, 9 June; 6791, Rancho El Escondido (29°55′12.6″N, 105°32′9.8″W), 1426 m, 8 April; 6884-5, 6903, 6942, Médanos de Bilbao, mpio. Viesca, Coahuila (25°25′36.7″N, 102°53′40.2″W), 1115 m, 3–5 June; 6958, Rancho El Cuervo (30°14′29.5″N, 105°7′45.2″W), 1134 m, 8 June; 7378-9, 27.8 km NW Bermejillo, Durango (26°6′50.5″N, 103°44′2.4″W), 1126 m, 22 July; 7402-3,7423-7, betwe Carrillo and Rancho Los Arenales (26°56′23.4″N, 103°52′48.5″W), 1125 m, 23–24 July; 7442-3, 7447, 7452, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 24–25 July; 7470, Rancho Ejido los Arenales (26°59′46.9″N, 103°49′29.8″W), 1165 m, 26 July; 7505-8, Jaco, mpio. Camargo (27°57′33.9″N, 103°57′16.2″W), 1258 m, 28 July; 7527-30, Rancho El Gatunozo, mpio. Camargo (28°6′50.7″N, 104°5′51.9″W), 1352 m, 28 July; 7671-95, Rancho El Setenta (31°11′16.2″N, 106°30′20.7″W), 1250 m, 1 August; 7700-3, Llano El Kilo (30°57′7.2″N, 106°28′42.9″W), 1296 m, 2 August; 7885, sand dunes S Sierra Texas, mpio. Viesca, Coahuila (25°28′43.9″N, 103°2′14.9″W), 1112 m, 1 September; 7939, 7976, Cementerio Sierra La Campana, mpio. Tlahualilo, Durango (26°7′39.1″N, 103°41′00.0″W), 1123 m, 2 September; 7977-8, Ejido San Dioní sio, mpio. Tlahualilo, Durango (26°12′9.1″N, 103°41′47.2″W), 1111 m, 2 September; 8015-7, betw Ejido San Dioní sio and La Zorra, mpio. Tlahualilo, Durango (26°14′39.7″N, 103°38′43.6″W), 1103 m, 3 September; 8033-41, Balneario División del Norte, mpio. Jiménez (26°53′32.8″N, 104°22′17.8″W), 1369 m, 4 September; 8066-7, betw División del Norte and hwy 45 (26°47′15.9″N, 104°21′2.0″W), 1280 m, 5 September.

All localities fall within the projected range of the species (Stebbins, 1985; Conant and Collins, 1998).

Acknowledgments

JLE is indebted to CONABIO for support, including grants nos. U003 and X004. Ralph Axtell and Richard Montanucci gave valuable advice regarding certain identifications.

Literature Cited

Axtell, R. W. 1998. *Holbrookia maculata* Girard. Interpretive atlas of Texas lizards (18):1-19.

Axtell, R. W., and R. G. Webb. 1995. Two new *Crotaphytus* from southern Coahuila and adjacent states of east-central Mexico. Bull. Chicago Acad. Sci. 16(2):1-15.

Conant, R., and J. T. Collins. 1998. A field guide to reptiles and amphibians of eastern and central North America. Third edition, expanded. Boston: Houghton Mifflin Company.

Dixon, J. R. 1970. *Coleonyx brevis*. Cat. Amer. Amphib. Rept.: 88.1-88.2.

Guillette, L. J., and H. M. Smith. 1982. A review of the Mexican lizard *Barisia imbricata*, and a description of a new subspecies. Trans. Kansas Acad. Sci. 85:13-33.

Horowitz, S. B. 1955. An arrangement of the subspecies of the horned toad, *Phrynosoma orbiculare* (Iguanidae). Am. Midl. Nat. 54: 204-218.

Lemos-Espinal, J. A., D. Auth, D. Chiszar, and H. M. Smith. 2002. Observations on the Chihuahua fringe-toed lizard, *Uma paraphygas*. Bull. Chicago Herp. Soc. 37(1):4-7.

Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2000. New distributional and variational data on some species of lizards from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 35(8):181-187.

Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2001. Distributional and variational data on some species of turtles and lizards from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 36(10):201-208.

Lieb, C. S. 2001. Anole lizards of Mexico: A taxonomic overview. Pp. 53-64. *In*: Johnson, J. D., R. G. Webb and O. A. Flores-Villela, editors, Mesoamerican herpetology: Systematics, zoogeography, and conservation. El Paso: Univ. Texas at El Paso.

McGuire, J. A. 1996. Phylogenetic systematics of crotaphytid lizards (Reptilia: Iguania: Crotaphytidae). Bull. Carnegie Mus. Nat. Hist. (32):1-143.

Mittleman, M. B. 1942. A summary of the iguanid genus *Urosaurus*. Bull. Mus. Comp. Zool. 91:103-181.

Pough, F. H., D. J. Morafka and P. E. Hillman. 1978. The ecology and burrowing behavior of the Chihuahuan fringe-footed lizards, *Uma exsul*. Copeia 1978:81-86.

Price, A. H. 1990. *Phrynosoma cornutum*. Cat. Amer. Amphib. Rept.: 469.1-469.7.

Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. Second edition, revised. Boston: Houghton Mifflin Company.

Tanner, W. W. 1987. Lizards and turtles of western Chihuahua. Great Basin Naturalist 47:383-421.

Webb, R. G. 1970. *Gerrhonotus kingii*. Cat. Amer. Amphib. Rept.: 97.1-97.4.

Whiting, M. J., and J. R. Dixon. 1996. *Phrynosoma modestum*. Cat. Amer. Amphib. Rept.: 630.1-630.6.

Wilgenbusch, J., and K. deQueiroz. 2000. Phylogenetic relationships among the phrynosomatid sand lizards inferred from mitochondrial DNA sequences generated by heterogeneous evolutionary processes. Syst. Biol. 49:592-612.

Bull. Chicago Herp. Soc. 37(6):107-108, 2002

Book Review: *The Cane Toad: The History and Ecology of a Successful Colonist* by Christopher Lever. 2001. xxvii + 230 pp. Westbury Publishing, Ilkey Road, Otley, West Yorkshire, LS21 3JP. http://www.smith-settle.co.uk/toad.htm £44 (about US$63). Hardcover, dust jacket, 11 color plates, b&w maps and figures throughout.

Kevin G. Smith
Department of Ecology and Evolutionary Biology
569 Dabney Hall
The University of Tennessee
Knoxville, TN 37996-1610

The publication of single-species accounts of reptiles or amphibians is frequently greeted by enthusiasm from the herpetological community, and with good reason. Such books generally represent years of research put forth by the author, research that future readers will not have to conduct for themselves. This comprehensive volume on *Bufo marinus*, the cane (or giant) toad is no exception. Most herpetologists interested in and familiar with the literature on *B. marinus* know that finding references for this species can sometimes be an unusual challenge. With its broad geographical distribution, history of introduction by agronomists, and popularity among laboratory scientists, articles on *B. marinus* frequently appear in a broad array of journals of varying readership, gray literature, and graduate theses. Prerequisite to the writing of a synthesis of the work on this species would be a challenging literature review by the aspiring author.

A relative neophyte to the herpetological literature, invasive species specialist Christopher Lever has apparently invested just such an effort into the preparation of *The Cane Toad.* Contributing to the book's treatment of the topic is an excellent review of the available literature and this is one of the book's most notable features. Experienced herpetologists—even those familiar with the literature on *B. marinus*—will be pleased by the treasures to be found in the list of references, nearly 750 strong. Although Lever's bibliography is not exhaustive, there is no other work on *B. marinus* with such an extensive literature base. This is the greatest strength of Lever's work, and the benefits of his thorough research may be reaped throughout the volume.

As can be inferred from the book's title, Lever's interest in *B. marinus* is primarily in its status as an invasive species. Most of the substance of the volume addresses this aspect of the research on the cane toad. The book begins with a Preface and Introduction that provide a sufficient overview of invasion biology and how it relates to biology and ecology on a broader scale. The accuracy of this review may suffer slightly from an oversimplification of the problems of studying invasion biology, however, as the author applies a reductionist approach to this topic. For the most part, though, Lever presents a thorough, objective view of the problem of invasive species and he generally avoids making value judgments about the benefits or detriments of introductions, perhaps even to a fault. Those of us with a particularly strong interest in conservation may object to Lever's contention that, "From a strictly ecological standpoint, all [human-mediated] alterations to an environment are entirely neutral (p. xxiv)." With regard to invasive species, it may be more appropriate to classify all environmental alterations as entirely negative. Potential minor philosophical disagreements notwithstanding, Lever successfully sets the stage for his review of *B. marinus* as an invasive species.

In a discussion of any species, it is wise to start with a summary of the natural history of the organism. Chapter One is just this, a treatment of the natural history of *B. marinus*, and a good one at that. For this topic, Lever draws heavily upon Zug and Zug's (1979) seminal work on the natural history of *B. marinus* in South America, so far the last word (chronologically as well as alphabetically) on cane toad natural history. Readers looking for a true work of natural history will be disappointed, however, though by no fault of Lever's. Information on *B. marinus* within its extensive native range is surprisingly limited, and although the author doesn't emphasize this point, field work on native cane toads is an open niche, ready for invasion by inspired biologists.

Lever leaves little time for a lamentation of the dearth of knowledge of *B. marinus* in the Neotropics, however, as he charges right into a 100-plus page treatment of the introduced populations of the cane toad (Chapter Two, "Naturalized Populations"). In this monolithic account he addresses not only populations currently in existence, but also unsuccessful or extirpated populations. A great deal of the information contained in this chapter is gleaned from Easteal's (1981) outstanding summary of the history of the introduction of *B. marinus*, but Lever doesn't stop there. He has almost fanatically (and successfully) sought out recent introductions and populations overlooked in previous works on cane toads. As an example, I suspect that many knowledgeable readers will be surprised, as I was, that cane toads can now be found on Diego Garcia in the Indian Ocean. Another positive attribute of this chapter is the collection of distributional maps, which are generally of very high quality and some (e.g., Florida) greatly exceed the quality and detail of maps from modern field guides (e.g., Bartlett, 1999; Conant and Collins, 1998) (although Lever's map is an overestimate of the range of *B. marinus* in Florida in contrast to the usual underestimate found in other works). This chapter is divided logically by global region or continent and then subdivided by country or island group and lends itself easily to use as a reference, especially since the author thoughtfully includes many references to the museums in which specimens from certain locations may be found.

Chapter Three follows with a review of the impacts of *B. marinus* in the nation most affected by its presence, Australia. This is an important chapter, since a worthwhile book on the cane toad could not be published without at least a cursory

examination of the problems caused by this potentially injurious invader. In "Impact of the Cane Toad in Australia," Lever treats the topic with appropriate gravity while avoiding invoking an alarmist tone. This chapter is cogently divided into sections summarizing the numerous categories of the effects of cane toads on wildlife as well as on human welfare—the latter effect being one frequently neglected by many authors. Although this chapter is thorough, Lever's skill is primarily in reporting the facts, and not necessarily in applying them to novel situations; it is thus left to the reader to be concerned about the impacts of *B. marinus* elsewhere.

The last three chapters of the volume are brief and a bit incongruous. Chapter Four, "Biological Control of the Cane Toad in Australia," provides an interesting overview of the many lines of research directed at this goal and the current state of research on this topic. The following chapter, "Evolutionary Experiments" is a very short reiteration of Easteal's (1981) assessment of the introduced populations of *B. marinus* as ideal for natural experiments in evolution. I must say that the final chapter, "Declining Amphibian Populations" left me a bit puzzled. I believe strongly in the importance of the exposure of this important topic, and Lever's overview is very thorough. Where this chapter fits in with the rest of the book is enigmatic since it is never made sufficiently clear why Lever addresses this topic. If the author feels that *B. marinus* may be an important contributor to amphibian declines, he fails to make this opinion known. The only synthesis to be found in this chapter is in the last sentence, where Lever mentions that research on declining amphibian populations may yield some insight into the issue of cane toad control in Australia. The need here for a concluding chapter or an epilogue in which the disparate discourse of the final chapters could be brought together in a logical summary is clear. This would be one of my strongest recommendations for a revised edition.

The after-material includes a useful Appendix listing countries and islands to which *B. marinus* is known to have been introduced, including the date of introduction, the source and number of the introduce toads, and the primary authority of the particular population. A glossary, the extensive list of references, and two indexes (one by taxon of parasites, pathogens, and diseases, and one by plant and animal taxon) make up the last of the 230 pages.

The form and function of the book are generally good; the typesetting is comfortable to read, and the quality of the 11 color illustrations is high. The cloth hardcover and dust jacket are both durable and attractive. The strength of the binding, however, seems to be wavering after only one thorough reading, and future page loss from the stitched binding seems to be a likelihood. The book is free of obvious technical errors, although I was occasionally frustrated by the mention of data without a related citation to the source. Typographical errors are present and include the occasional misspelling of cited authors and even incorrect page listings in the Table of Contents. These errors are minimal, though, and are largely of little consequence to the content.

Overall, the strengths of "The Cane Toad" are mostly attributable to the thorough literature review performed by the author. The final product is a facts-only book with little additional interpretation. This style is useful for the reader who wants to get a hard and fast lesson in past research on *B. marinus*, and although Lever doesn't indicate particular avenues of research which remain unexplored, you can be almost sure that if he doesn't mention it, it hasn't been done.

The bottom line is that readers interested in a light, natural history volume may want to look elsewhere for their next read. This is a rather sober work, and the enlightening anecdotes of Harry Greene's "Snakes" or Marty Crump's "Golden Frog" are noticeably absent. But if you are interested in a systematic, factual account of the current state of research on the cane toad, then this book is very highly recommended.

Literature Cited

Bartlett, R. D., and P. P. Bartlett. 1999. A field guide to Florida reptiles and amphibians. Houston: Gulf Publishing Company.

Conant, R., and J. T. Collins. 1998. A field guide to reptiles and amphibians of eastern and central North America. Boston: Houghton Mifflin Company.

Easteal, S. 1981. The history of introductions of *Bufo marinus* (Amphibia: Anura); a natural experiment in evolution. Biological Journal of the Linnean Society 16:93-113.

Zug, G. R., and P. B. Zug. 1979. The marine toad, *Bufo marinus*, a natural history resume of native populations. Smithsonian Contributions to Zoology 284:19-58.

Bull. Chicago Herp. Soc. 37(6):109-110, 2002

A Trip to Carlyle Lake

by Steve Sullivan

Members and ex-members of the CHS board were recently invited to observe a group of dedicated scientists work with the massasauga rattlesnake (*Sistrurus catenatus*), a state endangered species. Of course, those of us who could make the time jumped at the chance. Mike Dloogatch, Emily and Will Forcade, Lori King, Chris Lechowicz, Linda Malawy, Mike and Christy Redmer, and Steve Sullivan were able to attend.

After a four-hour ride from Chicago we (Mike D., Lori, Linda, and Steve) found ourselves near the small town of Carlyle, Illinois, home of one of the last healthy populations of massasauga in the state. Although our primary goal was to observe the snake research, we also wanted to act as advocates for the massasauga and educate the locals about this important species.

Our first stop was the Super 8 where we were greeted by polite but apprehensive staff. They were careful to let us know that we couldn't bring any snakes into the hotel but that we were welcome to take all of the snakes back to Chicago when we left. Our stop at the gas station confirmed this was a common sentiment, only here it was expressed much less politely. Whenever people expressed doubt about the value of the massasauga, Lori would say that she would prefer having a healthy population of massasaugas restored to the Chicago area to having Michael Jordan restored to the Bulls. Needless to say, we got some strange looks.

As we headed out of town toward the study sites we saw two DOR (dead on road) prairie kingsnakes (*Lampropeltis calligaster*) near a homestead with a big pile of tin and scrap. Linda urged that we hop the fence and look for snakes but, thankfully, the level head of Mike Dloogatch prevailed and we pulled into the yard to ask permission first.

The sign on the gate advertised "pure urine." As we drove up the gravel drive two people watched us suspiciously. One was the owner of the property, a gravely voiced, heavily mustachioed deer wrangler named Mark; the other young man was his son. Lori and Linda soon won their confidence and they agreed to show us around the property. As we walked, Mark told us how angry he was the week before when a group of people hopped the fence to his property and scared his deer; we were glad we had asked permission. He showed us a pet "monkey" (actually a coatimundi) named Gizmo, a trio of pet silver fox, and the herd of whitetail deer, from which the "pure urine" was harvested (for use by hunters). He also let us search the pile of tin and gave us a tour of a pond on the property where, he claimed, he often saw massasaugas.

Mark appeared to be quite knowledgeable about the habits of the snakes. He knew where to find them and was pretty sure we wouldn't find any so late in the day. Just before we left he brought out a Ziploc bag containing a newspaper clipping about the massasauga and a small frozen snake. He explained that his wife had found the snake dead and, near as they could tell, it was a baby massasauga. They had saved it in case it was valuable. It turned out to be a common watersnake (*Nerodia sipedon*), but we commended Mark for his good intentions and were happy to see someone who felt relatively positive towards snakes.

We drove from Mark's place along one of the levees that rim Lake Carlyle, "Illinois's Largest Lake," to the trailer where the researchers live. There we met Mike Dreslik, the lead field researcher on the massasauga study, and Don Shepard, Ben Jellen and Mike Andre, grad students who help to trap, track and study the massasaugas. A fifth researcher was Andy Kuhns, who is studying eastern and ornate box turtles (we were surprised and interested to learn that both species occur in the area). On the deck in front of the trailer was a vat of road-killed herps that were being processed for the scientific collections at the Illinois Natural History Survey. Inside was a small group of live massasaugas, a beautifully patterned hognosed snake and a tubful of box turtles, all of which were due to be released soon as part of various studies.

Most exciting to us were the live massasaugas. These had just been taken to the St. Louis Zoo where they had radio transmitters implanted, were X-rayed, and had ultrasounds done. The radio transmitters allow the researchers to follow the snakes for approximately one year, after which time the transmitter is removed. The ultrasounds and X-rays show the reproductive state of the snakes and may disclose any abnormalities. These physiological data are recorded along with field data such as location, air temperature, vegetative cover, and wind speed, and behavioral data such as distance traveled, choice of cover, and activity. The implanted snakes are located and the data are recorded at least once every three days, until the snakes enter hibernation. Eventually, enough data will be gathered for the scientists to begin to understand the life cycle of this species and how human activities affect it.

We left the researchers for a carnivorous dinner at a greasy spoon called "Sid's" then went out to drive the roads around the lake. Luckily it was a dark and stormy night, so we saw lots of anurans including cricket frogs (*Acris crepitans*), American toads (*Bufo americanus*), Cope's gray treefrogs (*Hyla chrysoscelis*) and southern leopard frogs (*Rana sphenocephala*).

That night we were kept awake by a loud golfers' convention. At one point the girl at the front desk threatened the golfers that she would call the police if they couldn't control themselves. By morning it was clear that, despite our idiosyncrasies, the hotel staff liked us. Maybe it was our winning personalities; maybe it was juxtaposition between the golfers and us. Whatever the cause, the locals were asking us questions and carefully listening as we talked about the massasaugas.

After an early breakfast we all met at the trailer. In addition to the CHS contingent and the resident researchers, we were joined by four others, who had driven down that morning from Champaign, Illinois. Dr. Chris Phillips of the Illinois Natural History Survey, under whose auspices the massasauga research was being conducted, was one of the four. After

hearing about the study in some detail, we took off for the first study site. Unfortunately it was still good anuran weather and the first snake we located with the radio tracker was deep in a crayfish hole. A few minutes later, Emily Forcade found an eastern box turtle and a little while after that Chris Lechowicz found a young massasauga coiled near a burrow. Mike Dreslik captured it for later processing and recorded the field data including air speed, air and ground temperature, and took a GPS location so that the snake could be released exactly where it had been captured.

In addition to studying the snakes, the research team has spent a lot of time improving their habitat. An invasive shrub called the autumn olive creates very dense stands in what would otherwise be good snake habitat. The researchers, working alongside Illinois Department of Natural Resources biologists and work crews from a local prison, have cleared large areas of this destructive species, improving habitat not only for the massasauga, but for most other native vegetation and wildlife in the area as well.

The second study site was near a parking lot and a large group of fishermen. Despite being such a heavily used area, most people we spoke to had never seen a massasauga and in this area we found two beautifully marked box turtles and another juvenile massasauga. This one almost got away. As the researcher moved in preparation for the capture, the snake dove for a crayfish hole. But he quickly grabbed it by the tail and, after a few anxious moments, was able to coax it from the burrow and into the capture tube. Following this, the data recording was something of an anticlimax. But records must be kept meticulously for an accurate understanding of the snakes to emerge and for the conclusions of the researchers to stand up to scientific scrutiny.

By now it was lunchtime and the researchers were very disappointed with the weather. On more snake-friendly days they normally caught many more snakes at each site; today was just too cold. However, they had saved a beautiful, large female for us to watch being processed. When the study began in 1999, they would process the animals in the field. However, they soon found that they could be more productive if they collected snakes during the day, processed them at night, and released them the next day. Between daytime captures, nighttime processing and data entry, there is often little time for sleep, but these scientists are passionate about their work.

Processing a snake allows the researchers to gather and accumulate the individual physical data for each captured animal. The snakes are weighed, photographed, and tagged with a microchip (PIT tag) that permanently identifies the snake. They also have their rattles painted in a unique color pattern. Once the snake is released, the painted tail allows the scientists to know which individual they are observing without the need to recapture and stress the animal. Some of the snakes undergo further processing when they are taken to the zoo for X-ray, ultrasound, and radio transmitter implantation. Only a few of the snakes undergo this important part of the study because it is such an expensive step. One implanted radio transmitter costs over $200. These transmitters are vital to the success of the study because they allow the scientists to accurately monitor snake movements and body temperature. All of the researchers work long hours, rain or shine, to track the snakes so that they can create a large enough dataset for accurate conclusions to be drawn.

We searched two more study areas but found only one more massasauga. Mike Dloogatch also found a very dark prairie kingsnake, but it was too cold for most reptiles by then. That night we continued to spread the good word about the snakes. People were at least interested to hear what we had to say and many were very friendly. When we checked out, the girl at the front desk of the hotel invited us back soon, noting that we were well mannered, had interesting stories to tell, and were quiet. I guess she never heard the loud noises that began in Linda's room in the wee hours of the morning when the gray treefrogs began to sing.

Bull. Chicago Herp. Soc. 37(6):110-112, 2002

HerPET-POURRI

by Ellin Beltz

Quote of the Month

"We also need a `nuisance people' program. And when somebody moves to a lake and tosses marshmallows to a gator, we tranquilize him, bind him with duct tape and relocate him to New Jersey." [*Orlando Sentinel*, May 16, 2002, by Mike Thomas, a Florida columnist]

Deja vu?

This month's column is brought to you from the wonderful web resources of Wes von Papineäu and my email files. Due to a near collapse of my computer, I lost several days when I could have been writing and now—down to the deadline—I'm using what is easiest and fastest to be sure you have a column to read this month. Do not, please, let this stop you from sending actual articles to: Ellin Beltz, P.O. Box 934, Ferndale, CA 95536.

What are they waiting for?

"The Southern Utah Wilderness Alliance and Center for Biological Diversity have formally asked the U.S. Fish and Wildlife Service [USFWS] to extend Endangered Species Act protection to *Rana onca*, a `rare southwestern frog' found only at Lake Mead National Recreation Area, says *San Francisco Gate*, May 8, 2002. The relict leopard frog was believed to be extinct, until the early 1990s when it was "rediscovered in eight locations." The frog has already been extirpated at two of the locations and the species is threatened primarily by water projects for development and agriculture that harm the

desert springs on which it is dependent and from invasive species and recreation visitors to Lake Mead. [*GreenLines*, #1632, May 10, 2002]

Nuisance humans

In Florida "state biologists report that ` up to a third of the dead baby sea turtles collected off Brevard County in the past decade had tar, plastic or both in their mouths or stomachs' says the *Miami Herald*, May 14, 2002. Once ingested, they eventually starve to death and ships that "spill fuel and garbage into the sea" are the likely culprits. Scientist say the "problem could be catastrophic for the endangered animals." [*GreenLines*, #1628, May 17, 2002]

Silent spring, 2002

"Frogs given trace amounts of DDT and other pesticides experience a near-total collapse in their immune systems. . . . The scientists said the work could shed light on the global decline in amphibians, since compromised immune systems would not leave them strong enough to "survive exposures to viruses and parasites." Among the pesticides tested in the peer-reviewed study was Malathion, a pesticide widely used for mosquito control in the U.S. and Canada. [Toronto *Globe and Mail*, April 24, 2002]

Web resources for frog/pesticide information

- <http://www.epa.gov/pesticides/reregistration/atrazine/> U.S. EPA atrazine page
- <http://www.pesticideinfo.org/PCW/Detail_Chemical.jsp?Rec_Id=PC35042> Pesticide Information Organization Atrazine Page
- <http://dlp.cs.Berkeley.edu/aw/declines/> Frog Declines
- <http://www.sciencenews.org/20020420/fob1.asp> Science News report
- <http://www.pnas.org/cgi/content/full/99/8/5476> Online summary and discussion of *Proceedings of the National Academy of Sciences*, Vol. 99 (April 16):5476-5480
- <http://elib.cs.berkeley.edu/aw/declines/declines.pdf> UC Berkeley press release, April 15, 2002

Value is relative

The May 9, 2002, *Natal Witness* of Pietermaritzburg, South Africa reports: "Rare snakes from the snake park at the St. Lucia Crocodile Centre are still missing after being stolen on Friday night. And when the thieves came back on Saturday night they attacked an employee who tried to intercept them. According to [the] centre manager . . . thieves stole a baby Burmese python, an albino python, two rock pythons and a brown house snake. . . . ` This is the second time that the Burmese python has been stolen. The first time we got her back, now she has gone again. These are very valuable snakes, but they are also our precious exhibits.' On Saturday night, the manager of the restaurant at the Croc Centre . . . was walking through the grounds at about 8 P.M. when he saw torchlight in the snake park enclosure. He and a security guard went to investigate. ` When we got to the snake park, we saw someone running away. The security guard, who had a torch, went after him. I followed, but because it was dark I did not see someone standing in the bushes next to the path. As I passed this person, he hit me on the head with something made of metal. It knocked me down. Then, as I got up, the first person came running past me and slashed at me with a knife or something....' [The center and police] appeal to anyone with information about the stolen snakes to come forward."

Salamanders Unsaved

"The U.S. Fish and Wildlife Service backtracked on Tuesday, deciding that federal rules governing construction in the Barton Springs watershed are sufficient to protect endangered salamanders from pollution. The biological opinion, signed by the service's acting regional director, concludes that the U.S. Environmental Protection Agency's stormwater construction permits don't jeopardize the survival of the Barton Springs salamander. That contradicts the draft report issued in July by the supervisor of the service's Austin office. The reversal means the environmental agency will not have to impose stricter conditions, such as requiring treatment of stormwater runoff, for construction projects involving more than five acres... The potential for development to damage the watershed and Austin's beloved swimming hole has long been a contentious issue. The 369-square mile watershed channels rainwater into the Barton Springs segment of the Edwards Aquifer, which is tapped by 50,000 people south of Austin for drinking water. For several months, Austin city biologists have been investigating why some salamanders have died and why others have been sickened by gas-bubble disease. One of several possibilities being examined is that some contaminant may be weakening certain salamanders, making them more susceptible to the disease." [Austin, Texas, *American Statesman*, May 8, 2002]

How big?

The *New Vision* newspaper of Kampala, Uganda, reported on May 8, 2002: "A Kampala-based hawker was yesterday arrested with 100 tortoises that he was transporting from Sironko district to Kajansi, Wakiso district. Nathan Etengu reports that [a man] was found with the tortoises aboard a Gateway Bus travelling from Moroto to Kampala through Namalu. A game ranger attached to the Mt. Elgon National Park arrested [the man] as he loaded the tortoises in the boot of the bus. The tortoises, some of them as small as snooker balls had been concealed in three bags. One of the tortoises had sustained injuries on its legs and mouth. [from Desiree Wong of http://www.Baskingspot.com]

Samaritans?

"Mombasa: Two British tourists cut short their holiday to Kenya yesterday after the death of an injured lizard they had rescued at an exclusive beach resort. . . . [The two] gave $230 so the animal could be treated by a veterinarian, a gesture that astounded staff and locals. The average monthly wage in Kenya is less than half that amount." [Toronto, Ontario, Canada, *National Post*, May 7, 2002]

Calm mom

"A five-year-old boy [in] northwest Queensland [Australia] awoke to a real-life nightmare when he found a 2.7 m python cosying up to him in bed. . . . [He said] he watched the snake

glittering in the light from a bathroom. . . . His mum . . . said she rushed to her sons' bedroom at 3 A.M. [after he] screamed and ran out. She saw the snake at the end of the room and her other son [two years old] still in his bed. [She said] ` I was just so glad it wasn't a venomous snake.' [The boy's] neck was punctured several times by the olive python. [His mum] said she had heard stories of pythons swallowing wallabies but did not fear her boys would be swallowed. She said [the boy] had been keen to tell the story to his friends at . . . preschool." [Australia *Sunday Mail*, May 5, 2002]

It still sucks in Arkansas

"They say it never rains for Toad Suck Daze, and this year's festival [saw] plenty of rides, music, crafts and, of course, food on a stick. Saturday's events were dominated by the bulk of the ever-popular toad races, including several high-profile races featuring various candidates for office in the upcoming elections. Participating in the Very Important Toad races were local dignitaries like [the] Mayor, . . . Attorney General . . . and U.S. Senator. [Later, the mayor] stuck around the Toad Dome to volunteer for toad duty, manning the toad stables between races and helping the toad jockeys keep their hands clean. ` This is probably the best part of my job. This festival is just a spectacular thing. People drop all their pretensions and play with toads and dance the Toady Woady and it's just a great event. People come out and just enjoy it. It's just a wonderful community event for that reason." [Arkansas *Log Cabin Democrat*, May 5, 2002]

Iguana be in pictures!

On April 29, 2002, London's *The Independent* reported: "There could be some controversy about the winner of a beauty contest in Rome at the weekend. No doubt the champion is dazzling, but from among several thousand exotic contestants, the winner has a mohican, a double chin, and, it has to be said, a slight pot belly. Nevertheless Grisu seemed to be taking the glory and attention serenely, rolling his eyes in their sockets and winding his foot-long stripy tail round his owner's waist. The scaly orange iguana is the supreme champion of ` Reptilia' — a three-day show of creatures whose usual forays into the limelight are confined to supporting roles in horror films. The show, judged by vets and biologists, was held in a Rome hotel, and drew about 15,000 visitors, according to the organiser."

World traveled turtles

An animal welfare group has collected hundreds of red-eared sliders from the wild after they were dumped. A decade ago thousands of these turtles were imported during the Teenage Mutant Ninja Turtles craze. Britain's cold killed many, but others survived, ravaging flora and fauna, like toads, newts and fish. "Members of the British Chelonia Group began collecting them a few years ago. Now they have arranged for them to go to Carapax, a wildlife charity in Tuscany, where the warm climate and habitat more closely resembles their homeland." [London Press Association, April 28, 2002]

Watch your step

The Escondido, California, *North County Times* of April 28, 2002 reports: "With a nationwide shortage of antivenom shrinking hospitals' stock of the serum, experts are advising people to be extra cautious this summer, which may be the worst year in the past half-century to be bitten by a rattlesnake. ` People need to be extra careful this season,' said . . . an emergency physician at Loma Linda University Center who leads the hospital's snakebite team. . . . Until recently, it was well-stocked in most hospitals, but a production problem has sparked a major shortage. . . . For the past 50 years, doctors depended on one type of antivenom, a horse-derived serum produced by Wyeth-Ayerst Laboratories called Antivenin. But then in 2001, Protherics Inc. devised a new antivenom that medical professionals say has revolutionized snakebite treatment. The new antivenom, called Cro Fab, was made from sheep and quickly became the favored of the two available antivenoms by physicians. ` Because (Antivenin) was derived from a horse serum, patients who received it commonly developed an allergic reaction,' he said. ` The Cro Fab has very minimal side effects.' In May 2001, Wyeth-Ayerst announced it was bowing out of the antivenom market. But last month, officials with Protherics announced that a problem with the filling and freeze-drying mechanism at their lab would result in no antivenom being produced for at least two months. [Even when it was in production.] ` One vial costs approximately several thousand dollars. You have a patient that comes in and requires 10 vials and it could easily cost the hospital $20,000 just to get the vials from the manufacturer.'"

We may be needing him this year

An Associated Press photo from Italy, May 2, 2002, was captioned: "The statue of San Domenico covered with snakes is carried for the traditional procession through the streets of downtown Cocullo, Italy, a small town 80 kilometers (50 miles) northeast of Rome. . . . Tens of thousands of people take part every year in the procession celebrating San Domenico, the patron saint of the town, who is believed to protect from snakebites and toothaches. This Catholic ritual dates back to the 17th century and is linked to local ancient pagan traditions."

Herpetology 2002

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

A NEW SPECIES OF *OSTEOCEPHALUS*

K.-H. Jungfer and W. Hödl [2002, Amphibia–Reptilia 23(1): 21-46] report that the South American spiny-backed treefrog, *Osteocephalus leprieurii*, as previously understood, is a composite of several species. They redescribe it morphologically on the basis of specimens from French Guiana and add other data on the biology of the species. They also describe a new species, *O. mutabor*, previously confused with *O. leprieurii*, from the Amazon Basin of Ecuador. The two species differ in coloration, vocalizations and ontogenetic color change. *Osteocephalus leprieurii* is remarkable for bearing nuptial excrescences not only on the thumb, but also under the fingers and on the chin. The vocal sac is semicircular expanding posterolaterally. *Osteocephalus mutabor* is characterized by numerous dark transverse bars on the dorsum and a semicircular vocal sac. The amount of keratinized tips on the dorsal granules in males of both species is dependent on sexual activity. The name *mutabor* is Latin for "I will change" and refers to the dramatic ontogenetic color change that juveniles of the new species undergo.

FUNGUS IN THE YELLOW-LEGGED FROG

G. M. Fellers et al. [2001, Copeia (4):945-953] note that the chytrid fungus *Batrachochytrium dendrobatidis* was originally reported in wild frog populations in Panama and Australia, and from captive frogs in the U.S. National Zoological Park (Washington, DC). This recently described fungus affects the keratinized epidermis of amphibians and has been implicated as a causative factor in the declines of frog populations. The authors report the presence of *B. dendrobatidis* in larval and recently metamorphosed mountain yellow-legged frogs (*Rana muscosa*) in or near the Sierra Nevada Mountains of California, an area where declines have been documented in all five species of native anurans. Forty-one percent (158 of 387) of larval *R. muscosa* examined in the field with a hand lens and 18% (14 of 79) of preserved larvae had abnormalities of the oral disc. Twenty-eight larvae were collected from 10 sites where tadpoles had been observed with missing or abnormally keratinized mouthparts, and 24 of these were examined for infection. Sixty-seven percent (16 of 24) of these tadpoles were infected with *B. dendrobatidis*. *Batrachochytrium dendrobatidis* was cultured from both tadpoles and recent metamorphs from one of these sites. Tadpoles with mouthpart abnormalities or confirmed chytrid fungus infections were collected at 23 sites spanning a distance of > 440 km and an elevational range from 1658 to 3550 m. Life-history traits of *R. muscosa* may make this species particularly susceptible to infection by *Batrachochytrium*. The authors recommend that biologists examine tadpoles for oral disc abnormalities as a preliminary indication of chytridiomycosis. Further, they believe that biologists should take precautions to prevent spreading this and other amphibian diseases from one site to another.

HAWKSBILL TURTLE MIGRATIONS

J. A. Horrocks et al. [2001, Chelonian Conservation and Biology 4(1):107-114] fitted four post-nesting hawksbill turtles (*Eretmochelys imbricata*) in Barbados with satellite transmitters during the 1998 nesting season as part of a Caribbean-wide hawksbill research satellite tracking project to investigate whether adult females may undertake long-distance migrations between their nesting and foraging sites. The four study animals left Barbados waters immediately following their final nesting activity for the season and traveled for periods of between 7 and 18 days to reach foraging grounds in Dominica, Grenada, Trinidad, and Venezuela, respectively. Straight-line travel distances ranged from 200 to 435 km. All animals seemed to be influenced by water depth and geostrophic currents along their migration routes. The turtles generally traveled through shallower waters provided this did not result in travel against significant currents. In places where the turtles encountered currents moving in the desired direction of travel, their travel speeds increased markedly. Foraging home range sizes varied between 1.96 and 49.5 km^2 and were positively correlated with the average water depth, suggesting that turtles residing in deep water foraging areas may have to forage over larger areas to obtain sufficient food resources. All turtles settled at locations where sea conditions made them relatively inaccessible to fishermen, and this may be a key to their survival in countries where turtle fishing is permitted. The data indicate that adult females nesting in Barbados, where they are fully protected, may spend the majority of their lives in waters where they are only partially protected or unprotected.

THE MATING SYSTEM OF SEA KRAITS

S. Shetty and R. Shine [2002, Herpetologica 58(2):170-180] studied sea kraits (*Laticauda colubrina*) on a small Fijian island during the mating season (September–December) in two successive years. These snakes forage at sea but return to islands to mate (and to lay eggs, slough their skins, and digest their prey). On land, many females are accompanied by one or more courting males. The males align their bodies with that of the female and occasionally twitch spasmodically. These groups may remain together for days, with overt courtship by males much less frequent and intense than in most previously-studied snake species. Experimental trials in outdoor arenas showed that larger females attracted more intense courtship. Females containing recently-ingested prey items were no more or less attractive to males than were unfed females. The intensity of courtship did not vary significantly among different times of day, nor was it consistently correlated with ambient temperature or with group size. Male sea kraits did not interact with each other in any overt way during courtship, and larger body size did not enhance male reproductive success. In several respects, the courtship of *L. colubrina* differs from that reported for other snake species.

Unofficial Minutes of the CHS Board Meeting, May 17, 2002

Vice-president Lori King opened the meeting at 7:34 P.M. Board members Mike Redmer and Jack Schoenfelder were absent.

Officers' Reports

Recording Secretary: Emily Forcade distributed and read the minutes of the April 12, 2002, board meeting. Corrections were made and the minutes were accepted.

Treasurer: Greg Brim distributed the treasurer's report. He said that projections indicate that our net revenue for the year will be down. Our liability insurer has raised the premium. A motion was made and seconded to accept the increase. There was no discussion. The motion carried unanimously. Jack Schoenfelder has sent in our May 15 annual tax return.

Membership Secretary: Mike Dloogatch said that we will soon need to print new membership forms.

Vice-president: Lori King said that Ron Humbert has offered to coordinate the Show and Tell at the May general meeting. Bob Herman is corresponding with the TV show Wild Chicago. He has invited them to come to our general meetings. Their shooting schedule runs from July to September. August was suggested as a time when there would be a number of children present. Our June speaker will be Andy Holycross who will talk about rattlesnakes. There is nothing new on the Utila Island project.

Lori mentioned that the group of board members and their families who visited the Carlyle Lake massasauga rattlesnake project were very impressed with the work being done there. After the tour, Lori King, Linda Malawy, and Steve Sullivan discussed ways the CHS could be involved with this program as part of our mission to participate in conservation, especially since this is a project close to home. They proposed producing T-shirts with a picture and slogan (they have ideas for both), which could be sold. All profits would go to the massasauga project. If this can be done by the IHS in July, we would have a good venue to begin the sale. Steve Sullivan is able to make a display of the animal in its natural setting, which could be used to support sales. Steve is writing letters to the DNR and to the Army Corps of Engineers letting them know what we are proposing. Other organizations, both commercial and not-for-profit, might also want to become involved. The money we provide would probably go to equipment such as PIT tags, which are currently being paid for by the DNR. The DNR is expected to run out of funds for this at some point in the future. Tom Anton said this study is part of a group of ongoing studies about eastern, western and desert massasaugas to determine which populations need to be protected. A motion was made by Ron Humbert to appropriate $200 to have Steve Sullivan produce a display model. Jenny Vollman seconded the motion. The motion carried unanimously. There was a brief discussion about having a line item for conservation versus a fund. The group was generally supportive of the T-shirt idea but a proposal to grant the funding for this was deferred.

Corresponding Secretary: Steve Sullivan said Mike Redmer wrote letters on the CHS letterhead to various schools and organizations letting them know we have speakers available.

Standing Committees

ReptileFest: Darin Croft said there was a wrap-up meeting on May 11. There are a lot of little things they want to work on. *Reptiles* magazine will be doing a story on herp societies, so we can take advantage of the opportunity to plug ReptileFest. Also *Reptiles USA* annual is very popular so we might want to advertise there.

Shows: Jenny Vollman said that the Field Museum would like us to exhibit on Members' Nights (June 5–7). She requested volunteers especially for Wednesday and Thursday.

Ad Hoc Committees

CAS: Steve Sullivan said our new meeting space would be equipped with blinds. Ron Humbert reported that cages for the rolling table exhibits are ready. The CAS is working on a configuration of what they want for the permanent/interim exhibit. We'll know what animals can be placed when the plan includes the cage facilities that will be present.

Trips: Bob Herman said that there would be a trip to the Detroit Zoo on September 28. We are optimistic that we can fill the bus at a cost of $35 per person. There was some discussion of alternate ways of charging. The cost includes round trip fare on a luxury bus equipped with audiovisual equipment and bathroom facilities. It also includes the admission to the zoo with a behind the scenes tour of Amphibiville, the new state of the art exhibit dedicated to displaying amphibians in natural settings that reflect their real habitats.

Animal of the Month: Ron Humbert will continue to chair this by popular demand. We will do some general and some specific animals. In June we will have milksnakes. In July, we will have herps less than one year of age.

Old Business

Museum of Science and Industry / SuperCroc: The SuperCroc exhibit will continue in 2003. CHS participation was very well received by the museum. They want us to continue to provide live animal displays. Paul Sereno and Gabrielle Lyon also want a close affiliation between Project Exploration and the CHS.

Round Table

Bob Bavirsha circulated a photo he came upon as part of his rescue efforts to illustrate the damage that can be done to a snake when a live rodent is left in the snake's enclosure unattended. It served as a sobering reminder of the potential dangers involved in feeding live prey.

The meeting adjourned at 9:30 P.M.

Respectfully submitted by Recording Secretary Emily Forcade

Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. P.O. Box 85, Alpine TX 79831. Call us **toll-free** at (800) 720-0076 or visit our website: http://www.themousefactory.com.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: Inland bearded dragons, *Pogona vitticeps*, available now. And more eggs hatching! Red/Gold × Sandfire Gold phase for $40 each or 2 for $70. For details contact Rich Crowley at pogona31@netscape.net or if local call (708) 485-5705.

For sale: Eastern indigo snake (*Drymarchon couperi*). Adult red-throated male, '89 hatch, $1000, to USDI permit holders only. Ed Stone, P.O. Box 55191, Madison WI 53705-8991, (608) 238-2891. E-mail: aor@itis.com

For sale: **Now accepting reservations for 2002 rare/unusual garters**: We expect offspring to be available in June or July. **Easterns**: Blais flames, $50–125 each; Blais speckled flames, $125 each; Blais peach flames, $50 each; erythristic easterns (high red) $50–100 each; double het (erythristic × melanistic eastern), $175/pair; double het (erythristic × Blais flame), $175/pair; melanistic eastern, $35 each; Florida Blue, $10–50. **Plains**: Snow plains (2 strains), $300 each, hets, $150 each; Albino plains (2 strains), $125 each, hets, $50; anerythristic plains (2 strains), $75 each, hets, $40 each, possible het plains (66%), $35 each; normal plains, $25 each / 2 for $40. **Red-sideds**: Albino red-sideds (very limited numbers), $350 each, 66% possible het, $100 each, 50% possible het, $75 each; anerythristic red-sided, $100 each, hets, $50, possible hets, $35 each; normal red-sideds $25 each / 2 for $40. **Wandering:** Het albino wandering, $75 each; normal wandering, $25 each / 2 for $40. Shipping is extra. Questions, call Scott at (919) 365-6120 EST, E-mail: SFelzersgarters@aol.com, web address: www.thamnophis.com/features/ScottFelzer/. [NC]

For sale: Green anacondas, c.b. 9/01, beautiful, healthy and DOCILE, $175 each; yellow anacondas, c.b. 6/01, flawless little screamers, $95 each; Amazon tree boas, c.b. 7/01, solid yellow, $125, orange and green, $150, both are female; 11' female tiger retic, stunning specimen, tame and a great feeder, $550 or best offer; jungle carpet pythons from nice black and yellow parents, $100 each or $175/pair. Mark Petros, Strictly Serpents, (847) 836-9426, E-mail: MLPserpent@hotmail.com.

Herp tours: Adventure trips to **Madagascar**! Journey somewhere truly unique to seek and photograph nature on the world's least-studied mini-continent. For maximum herp fun and discovery, join Bill Love as we go where few people will ever venture in their lives. Let his experience assure a comfortable tour finding the most colorful and bizarre species on the planet! Get all the details at Blue Chameleon Ventures' comprehensive new website: <http://www.bluechameleon.org>, E-mail: bill@bluechameleon.org, or call (941) 728-2390.

Herp tours: Experience the Amazon! Road-ride in Costa Rica! See and photograph herps where they live, have fun doing it, make good friends and contacts, and best of all . . . **relax!** From wildlife tours to adventure travel, **GreenTracks, Inc.** offers the best trips led by internationally acclaimed herpers and naturalists. See our website <http://www.greentracks.com> or call (800) 9-MONKEY. E-mail: greentracks@frontier.net.

Wanted: Back issues of *Reptilian* magazine(U.K.). I would like to purchase Volume 1, #1, #4, #5; Volume 2, #8; Volume 4, #3. Also, I would like to purchase Issue #1 of *Reptilia* Magazine (Spanish Edition). Denis Baird, 4809 S. Luna, Chicago IL 60638.

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: <MADadder0@aol.com>.

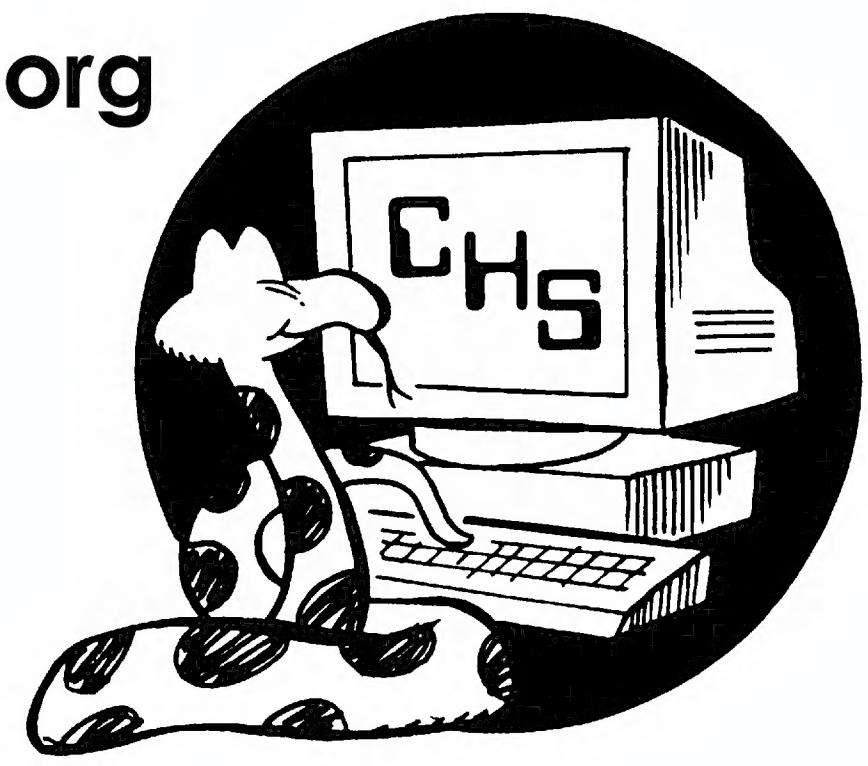
We're goin' to the zoo, zoo, zoo

All aboard for a fun-filled day trip to the Detroit Zoo. Visit *Amphibiville,* home of the National Amphibian Conservation Center. Enjoy a behind-the-scenes tour of the zoo's pre-eminent *Reptile House*. Afterwards, explore the zoo on your own and take in *The Arctic Ring of Life Exhibit* and the *Butterfly/Hummingbird Garden.* Learn more about the zoo at www.detroitzoo.org. The CHS has arranged luxurious, washroom-equipped bus transportation, with movies-in-transit. Anyone who attended the International Herpetological Symposium in Detroit last summer can tell you what a special and hospitable zoo this is! So reserve the date: **Saturday, September 28**, from 6 A.M. until 10 P.M. Seats are limited and will be available on a first-come-first-serve basis . . . so don't delay. Contact Bob Herman for details at (773) 667-4095 or by E-mail at bobherman@ameritech.net. Round-trip transportation with zoo admission is just $35 per person! Children are welcome.

You can come too, too, too!

Next time you surf the WorldWide Web, crawl, run, slither, slide, jump, or hop over to the CHS web site!

www.chicagoherp.org



You'll find:

- **Announcements**
- **CHS animal adoption service**
- **CHS events calendar & information**
- **Herp news**
- **Herp links**
- **Meeting/guest speaker information**
- **Photos of Illinois amphibians & reptiles**
- **Much, much more!**

Chicagoherp.org is accepting applications for banner advertisements or links from herpetoculturists and manufacturers of herp-related products. Visit the site and contact the webmaster for details on how you can sponsor CHS!

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, June 26, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Dr. Andrew T. Holycross** of Arizona State University in Tempe, Arizona, will speak to us about his research on rattlesnakes of the Southwest, with emphasis on the desert massasauga.

Speaking at the July 31 meeting will be **Michael Dreslik**, a graduate student at the University of Illinois at Champaign-Urbana. Mike is the lead field researcher on a large-scale study of the eastern massasauga at Carlyle Lake in south-central Illinois.

The regular monthly meetings of the Chicago Herpetological Society now take place at Chicago's newest museum — the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the July 19 board meeting, to be held at the North Park Village Administration Building, 5801 North Pulaski Road, Chicago. To get there take the Edens Expressway, I-94, and exit at Peterson eastbound. Go a mile east to Pulaski, turn right and go south to the first traffic light. Turn left at the light into the North Park Village complex. At the entrance is a stop sign and a guardhouse. When you come to a second stop sign, the administration building is the large building ahead and to your left. There is a free parking lot behind the building.

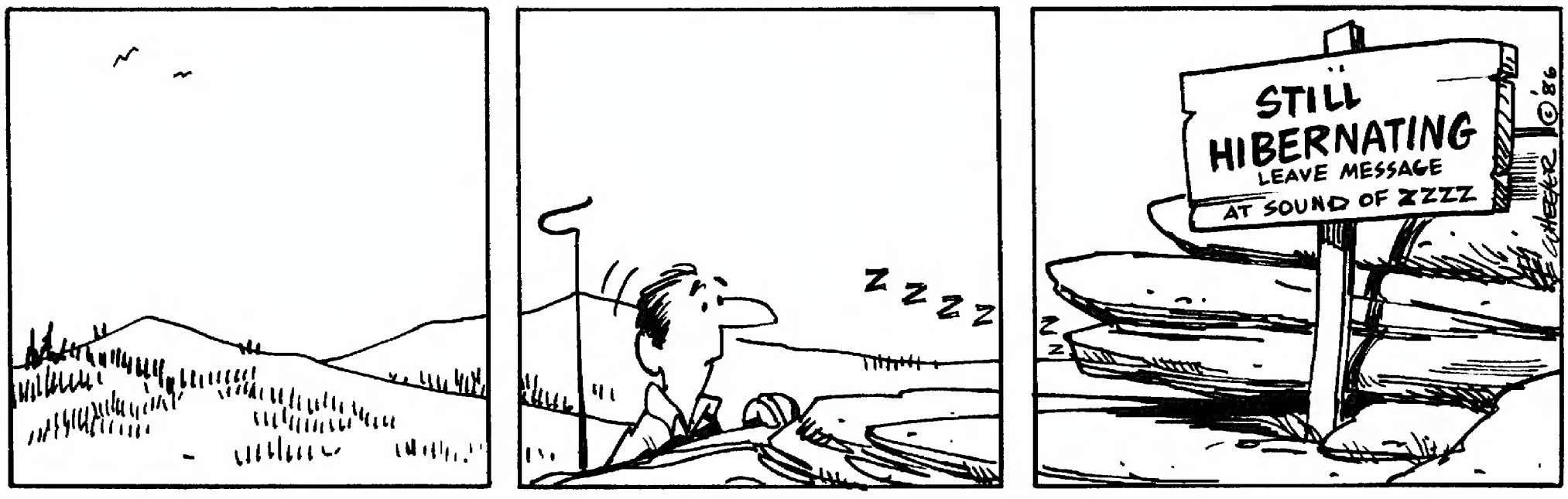
The Chicago Turtle Club

The next meeting of the Chicago Turtle Club will be on Sunday, June 30, 1:00 – 3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. This meeting will feature a guided tour of the North Park Village grounds, beginning at 1:30 P.M. Meetings are informal; questions, children and animals are welcome; parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC web site: http://www.geocities.com/~chicagoturtle.

HERP OF THE MONTH

Each monthly meeting will showcase a different herp. CHS members are urged to bring one specimen of the "Herp of the Month" to be judged against the entries from other CHS members. Ribbons and/or trophies will be awarded to the top three winners. June's featured animals will be **milksnakes** –any subspecies of *Lampropeltis triangulum* will qualify. And for July, bring **any reptile or amphibian under 1 year of age**.

THE ADVENTURES OF SPOT



Periodicals Postage
Paid at Chicago IL

CHICAGO HERPETOLOGICAL SOCIETY

Affiliated with the Chicago Academy of Sciences

2060 North Clark Street • Chicago, Illinois 60614